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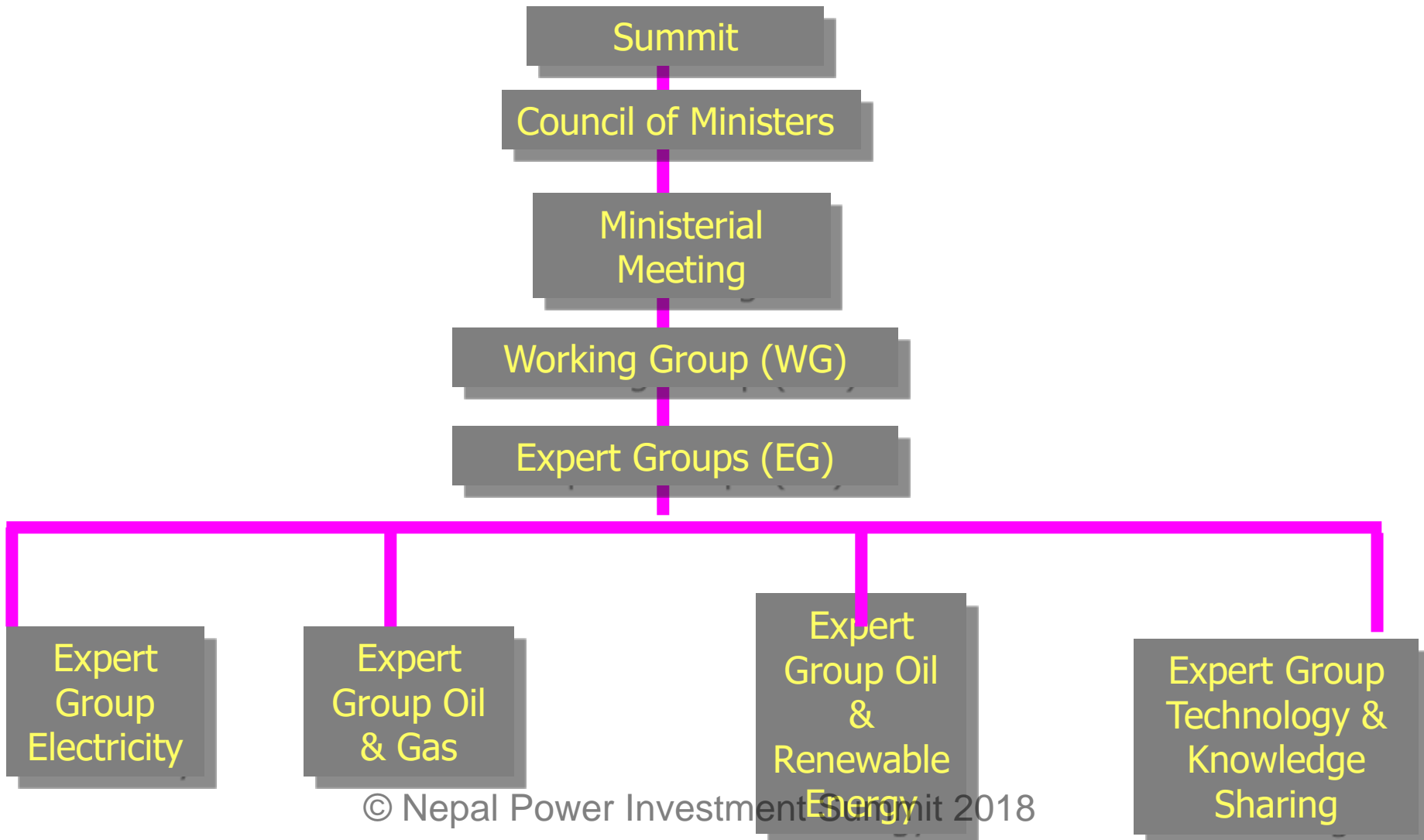
# **South Asian Association for Regional Cooperation (SAARC)**

## **An Overview of Energy Scenario in South Asia Region and various Initiatives by Member States**

**ALI HAIDER ALTAF  
DIRECTOR(ETS)**



# Hierarchy & Mechanisms





# South Asian Power Sector Profile

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- Afghanistan:
  - Generation is mainly done by imported sources (Coal and Gas) by 2022 and local sources of Hydro, Coal and Gas will develop by 2027
- Bangladesh:
  - Generation in Bangladesh is primarily Gas and Coal
  - Load forecast about 6.7% annual growth
- Bhutan:
  - Bhutan generation is comprised entirely of hydro power
  - Load forecast has about 4% to 5% annual growth
- India:
  - Coal is the dominant power source in India
  - Different Load forecasts are used for each region in India
    - North, West, North-East 5%:South 7%



# South Asian Power Sector Profile

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## ■ Nepal:

- Nepal generation is comprised entirely of hydro power
- Load forecast – about 6.5% annual growth
- By 2027, extensive development of the 400 kV network is planned

## ■ Sri Lanka:

- Coal is the dominant generation type in both 2022 and 2027
- Load forecast - about 5% annual growth

## ■ Pakistan:

- Large coal and hydro power generation increment within the period.
- Load forecast of about 10% to 15% growth



# South Asian Power Sector Profile

Country	Installed Capacity (MW)
Afghanistan	1341
Bhutan	1,614
Bangladesh	12,071
India	329230
Nepal	765
Pakistan	24,829
Sri Lanka	4050
Total	373900

Source: SARI/EI



# Hierarchy & Mechanisms

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## ■ Ministerial Meetings

### ■ Five Meetings held so far

- 2005 October, Islamabad,
- 2007 March, New Delhi,
- 2009 January, Colombo,
- 2011 September, Dhaka
- 2014 October, New Delhi

### ■ Sixth Ministerial Meeting

- Expected to be held in Kathmandu in 2018.



# Hierarchy & Mechanisms

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- Working Group (WG)
  - Eight Meetings of WG held so far:
    - First Meeting was held in June 2004 in Islamabad. The first meeting discussed and recommended: a) Plan of Action; (b) Setting up of a SAARC Energy Forum at Ministerial level; and (c) establishment of a SAARC Energy Centre.
    - Second Meeting was held in December 2004 in Islamabad. The Second meeting reviewed the progress on the modalities in creating a South Asian Energy Cooperation including the concept of an Energy Ring.
    - Third Meeting was held in January 2007. The third meeting finalized the Terms of Reference on Energy Trade Study, Concept Paper on Energy Ring and proposed programmes for the SAARC Energy Centre.



# Hierarchy & Mechanisms

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- Fourth Meeting was held in March 2008 in Islamabad. The Meeting reviewed implementation of its earlier decisions and made recommendations for future activities for the year 2008-9. It also reviewed ongoing collaboration with ADB especially progress on Energy trade study.
- Fifth Meeting was held in April 2009 April. The meeting recommended formation of four Experts Groups on (a) Oil and Gas (b) Electricity (c) Renewable Energy (d) Technology/Knowledge Sharing.
- Sixth Meeting was held in August 2011. The Meeting reviewed the progress on the implementation of SAARC Plan of Action – Energy Conservation and Efficiency.





## Hierarchy & Mechanisms

- The Seventh Meeting was held in March 2013. The meeting considered the draft text of SAARC Framework Agreement on Energy Cooperation (Electricity).
- The Eighth Meeting was held in August 2014. The meeting reviewed the status of implementation of decisions of the SAARC Energy Ministers. The Meeting also finalized the draft text of SAARC Framework Agreement.
- The Ninth Meeting of the Group is expected to be held in the first half of 2018 in Pakistan.



# Hierarchy & Mechanisms

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## Expert Groups Meetings

### Expert Group on Electricity

- The First Meeting was held in December 2009. The Group finalized its ToRs.
- The Second Meeting was held in January 2011. The Group considered the Roadmap for developing SAARC Market for Electricity
- The Third Meeting was held in December 2013. The meeting finalized the text of SAARC Framework Agreement on Energy Cooperation (Electricity).



# Hierarchy & Mechanisms

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## Expert Group on Oil & Gas

- The Frist meeting was held in July 2011. The Group considered and finalized its ToRs.



# Hierarchy & Mechanisms

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## Expert Group on Renewable Energy

- The First Meeting was held in August 2011. The Group adopted its ToRs.
- The Second Meeting was held in June 2014. The Group adopted its Work Plan on Energy for the year 2016.
- The Third Meeting was held in November 2015. The Group considered a Concept Note on Creation of Revolving Fund for the Renewable Projects.
- The Fourth Meeting was held in Sept. 2017. The meeting adopted its Work Plan for 2018. The Group also approved the Creation of Revolving Fund for the Renewable Projects.



# Hierarchy & Mechanisms

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## Expert Group on Technology & Knowledge Sharing

- The First Meeting was held in May 2012. The Group considered and finalized its ToRs.



# Development and Progress

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- SAARC Framework Agreement on Energy Cooperation (Electricity) was signed in November 2014.
- Agreement has been ratified by five Member States.
- SAARC Council of Experts of Energy Regulators (Electricity) has been established with the technical and Financial support of the Asian Development Bank.
- Two Meetings of the Council are held so far; December 2016 and October 2017



# Development and Progress

- Overall aim of the Council is to provide enabling regulatory environment for materializing SAARC Energy Ring through implementation of SAARC Framework Agreement on Energy Cooperation (Electricity).
- The Council would be exclusively focused on role, functioning and performance of electricity regulators in the perspective of cross-border power trading in South Asia.
- The Council will also serve as the regional forum for electricity regulators of SAARC countries to discuss, interact, share knowledge and experiences and achieve consensus on harmonized rules and regulations across various areas that will enable cross-border power trade.



# Collaboration with International Partners

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- Asian Development Bank has carried out two studies:
  - SAARC Regional Energy Trade Study (SRETS). Concluded in 2010.
  - Study on South Asia Regional Power Exchange (SARPES). Concluded in 2013.





# SAARC Energy Centre (SEC)

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- Established in 2006 in Islamabad.
- Its mandate is to initiate, coordinate and facilitate SAARC programme in energy sector. Its goals include: strengthen region's capability in addressing global and regional energy issues; facilitate intra-regional trade in energy; promote energy efficiency and conservation; serve as energy information network etc.
- 12<sup>th</sup> Meetings of the Governing Board have been held so far.



# Way Forward

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- For a pan South Asia region grid, the interconnections between Pakistan and India is critical to connect the Western part of region and augment the interconnections established on eastern side.
- Potential to bring about an integration in the power systems of Central Asian countries and South Asian countries.
- In the short to medium term, the interconnection between Pakistan and India can benefit in meeting the generation deficit at a competitive price.
- In the long term, the interconnected system will provide opportunities for the new capacity additions within Pakistan to export to the power deficient markets in South Asia and Central Asia.
- A detailed feasibility study for grid interconnection and formation of joint committees.



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**THANK  
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