

Panel Discussion

Strengthening Power Systems for Energy Transition in South Asia

In collaboration with UNESCAP and the SAARC Energy Centre

South Asia is undergoing a rapid transformation of its energy systems, driven by rising electricity demand, increasing deployment of renewable energy, and growing efforts to improve energy security and reduce greenhouse gas emissions. Solar, wind and other renewable energy technologies are expanding rapidly across the region, creating significant opportunities to improve the sustainability and affordability of electricity supply. At the same time, the increasing share of Variable Renewable Energy (VRE) introduces new demands on power systems, requiring power systems to become more flexible, reliable, digitally enabled and capable of balancing fluctuations in electricity generation and demand.

Energy transition depends not only on the availability of renewable energy resources or investment in generation capacity, but also on the readiness of power grids to integrate, transmit, distribute and manage increasingly diverse sources of electricity. South Asian countries face varying grid-readiness challenges, including weak infrastructure, limited flexibility, inadequate planning and digitalisation, and regulatory gaps that hinder renewable energy integration.

Recognising the importance of power system readiness as an enabling condition for the energy transition, ESCAP and SDPI are jointly undertaking a study covering select South Asian countries – Bangladesh, Pakistan and Sri Lanka, as part of a broader project titled '*Strengthening Grid Readiness for Asia and the Pacific.*' The project seeks to assess the preparedness of national power systems for higher shares of renewable energy and to identify strengths, gaps and priority areas for action. The findings can help inform policy and investment decisions, identify technical assistance and capacity building priorities, as well as opportunities for greater regional cooperation among South Asian countries.

This *Panel Discussion* aims to provide a platform to present and critically examine the preliminary findings of the study with policymakers, energy experts, development partners, and other stakeholders. It will seek to validate the emerging evidence, bring country perspectives to the analysis, and identify areas where further data, indicators or contextualisation may be required. The discussion will also explore how the study's findings can support greater regional cooperation, including coordinated planning, knowledge-sharing, cross-border interconnections and power trade to strengthen grid readiness. Specifically, the speakers will:

- Present and discuss the preliminary findings of the power system readiness assessment for Bangladesh, Pakistan and Sri Lanka, incorporating perspectives from policymakers, energy experts and other stakeholders.
- Identify key gaps, bottlenecks and priorities for strengthening power system readiness for higher shares of renewable energy, including infrastructure, system flexibility, planning, digitalisation, institutional capacity etc.

- Explore opportunities for regional cooperation and action, including coordinated planning, knowledge-sharing, cross-border interconnections and power trade, and identify areas for policy support, investment and technical assistance.

Speakers will also address the following questions:

- What are the most critical constraints to power system readiness? Are they primarily infrastructure, operational, technological, institutional or regulatory in nature?
- Are countries investing sufficiently in modernisation of grids relative to the pace of renewable energy deployment and electrification?
- What capabilities will system operators and utilities need as power systems become more decentralised, variable and digitalised?
- How can power system planning and investment become more forward-looking and better aligned with renewable energy development?
- How can regional cooperation support the development and modernisation of power systems in South Asia? What role can regional institutions such as the SAARC Energy Centre play in facilitating knowledge-sharing, coordinated planning, capacity-building, cross-border power trade etc.?

Organisers:

Dr Khalid Waleed, Research Fellow, Sustainable Development Policy Institute, Pakistan
Email: khalidwaleed@sdpi.org

Engr. Ubaid Ur Rehman Zia, Head/Lead Energy Unit & Senior Research Associate,
Sustainable Development Policy Institute, Pakistan
Email: ubaid@sdpi.org

Mr Muhammad Umer, Research Associate, Sustainable Development Policy Institute,
Pakistan
Email: muhammad_umer@sdpi.org

Mr Joseph George, United Nations Economic and Social Commission for Asia and the
Pacific, India
Email: george15@un.org