

Long-Term Energy Scenarios (LTES) for developing national energy transition plans in Asia.

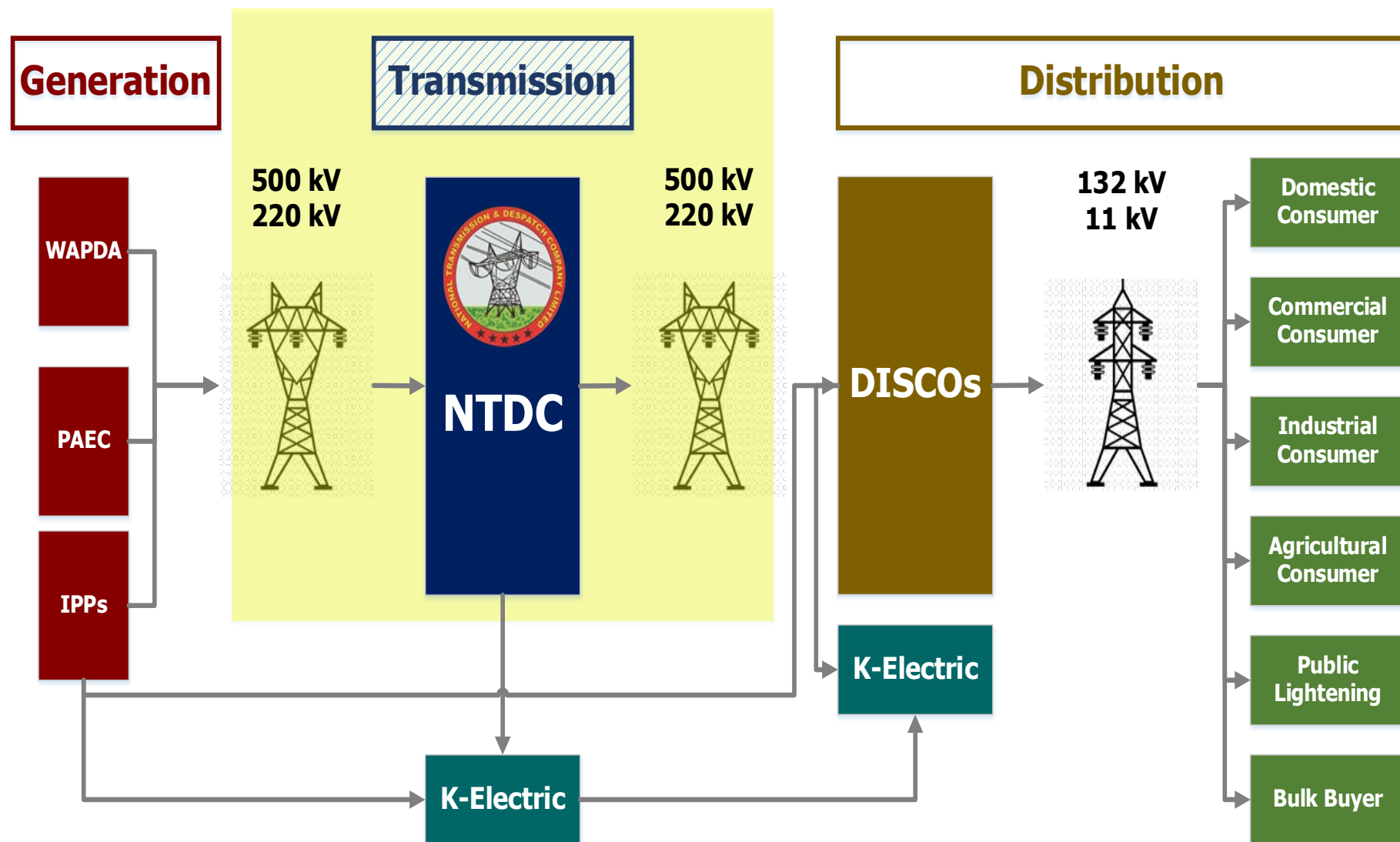
Webinar series

PAKISTAN ENERGY SECTOR

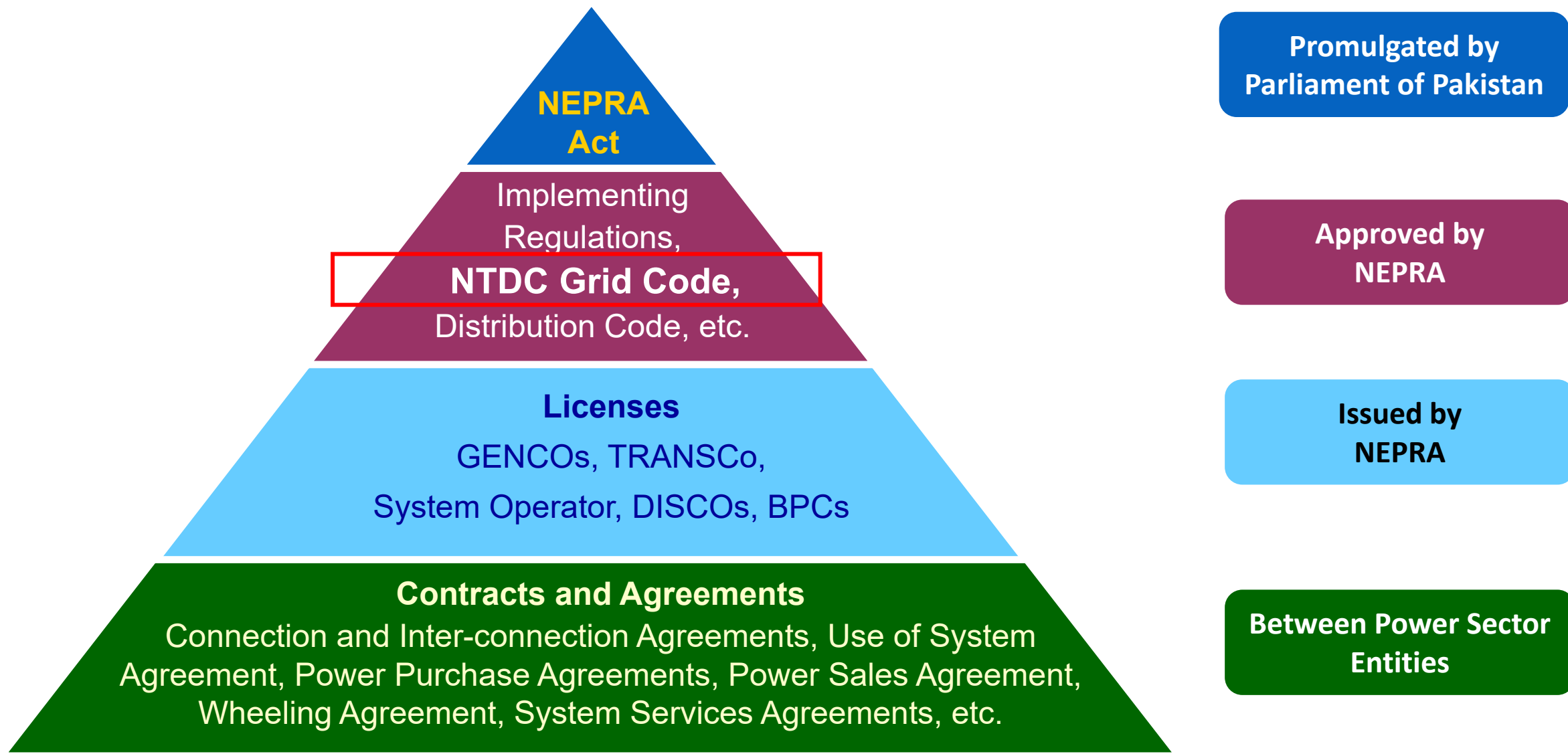
Manager: Shahbaz Ahmed
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August 16, 2023.



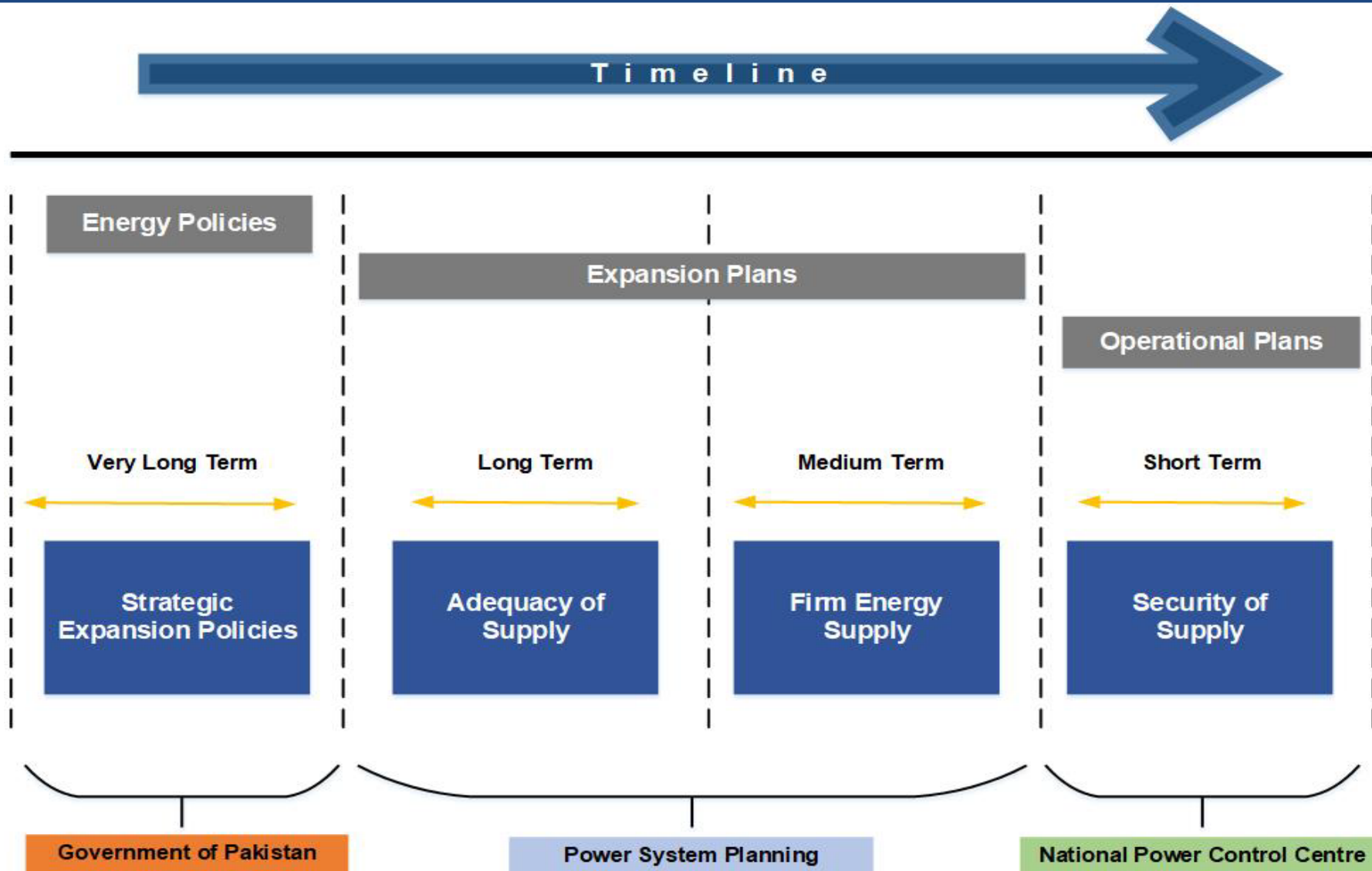
Pakistan Power Sector Players



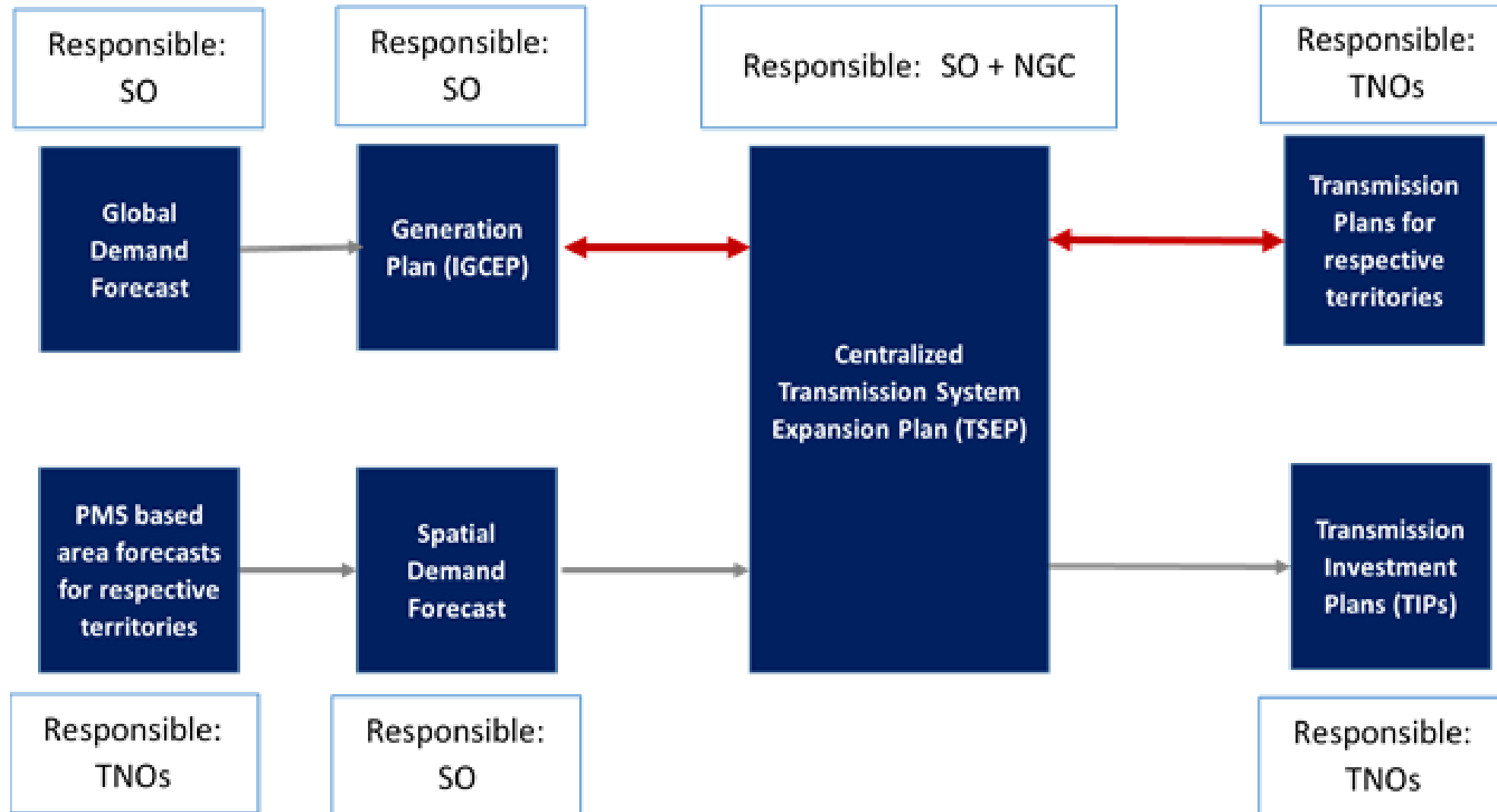
Pakistan Power Sector Governance Framework



LTES Development Framework in Pakistan



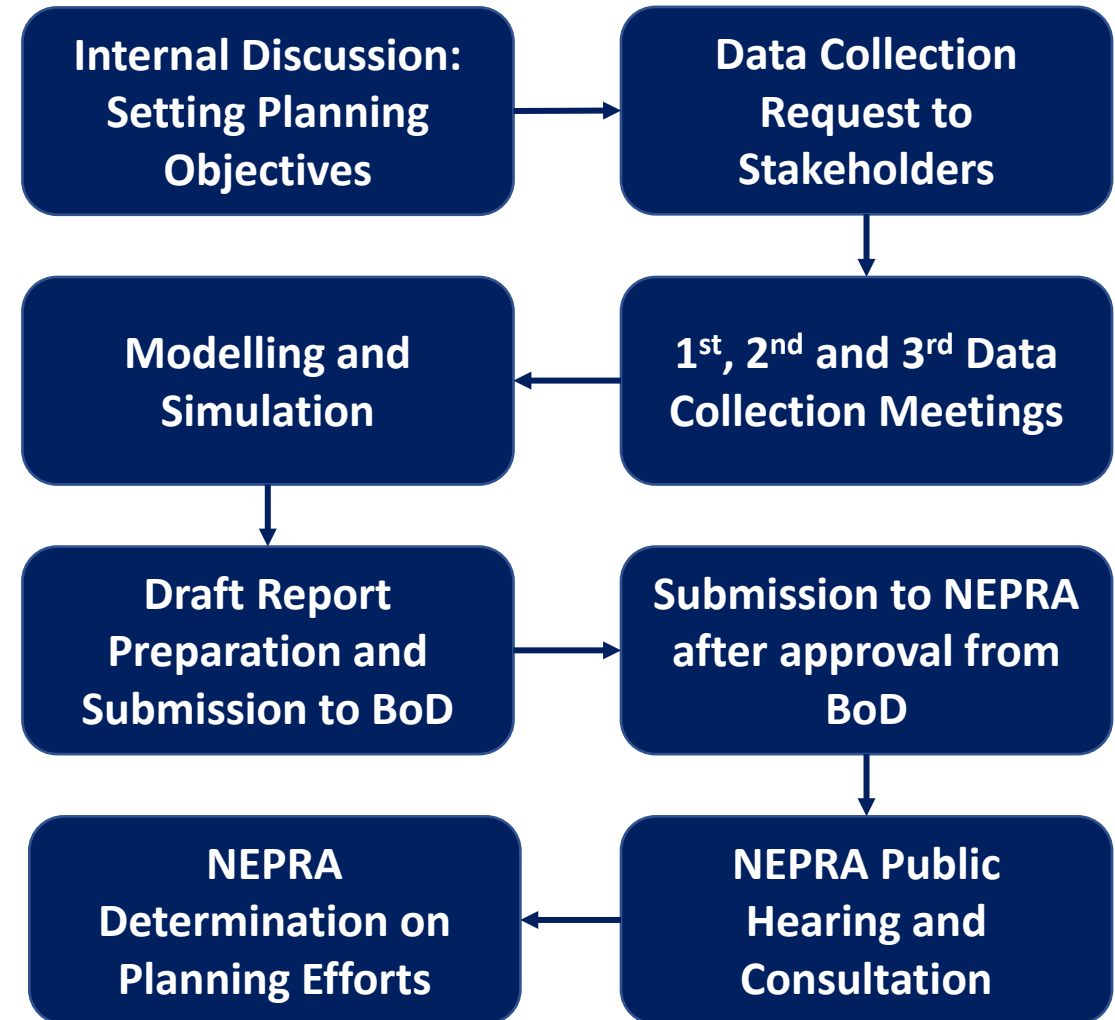
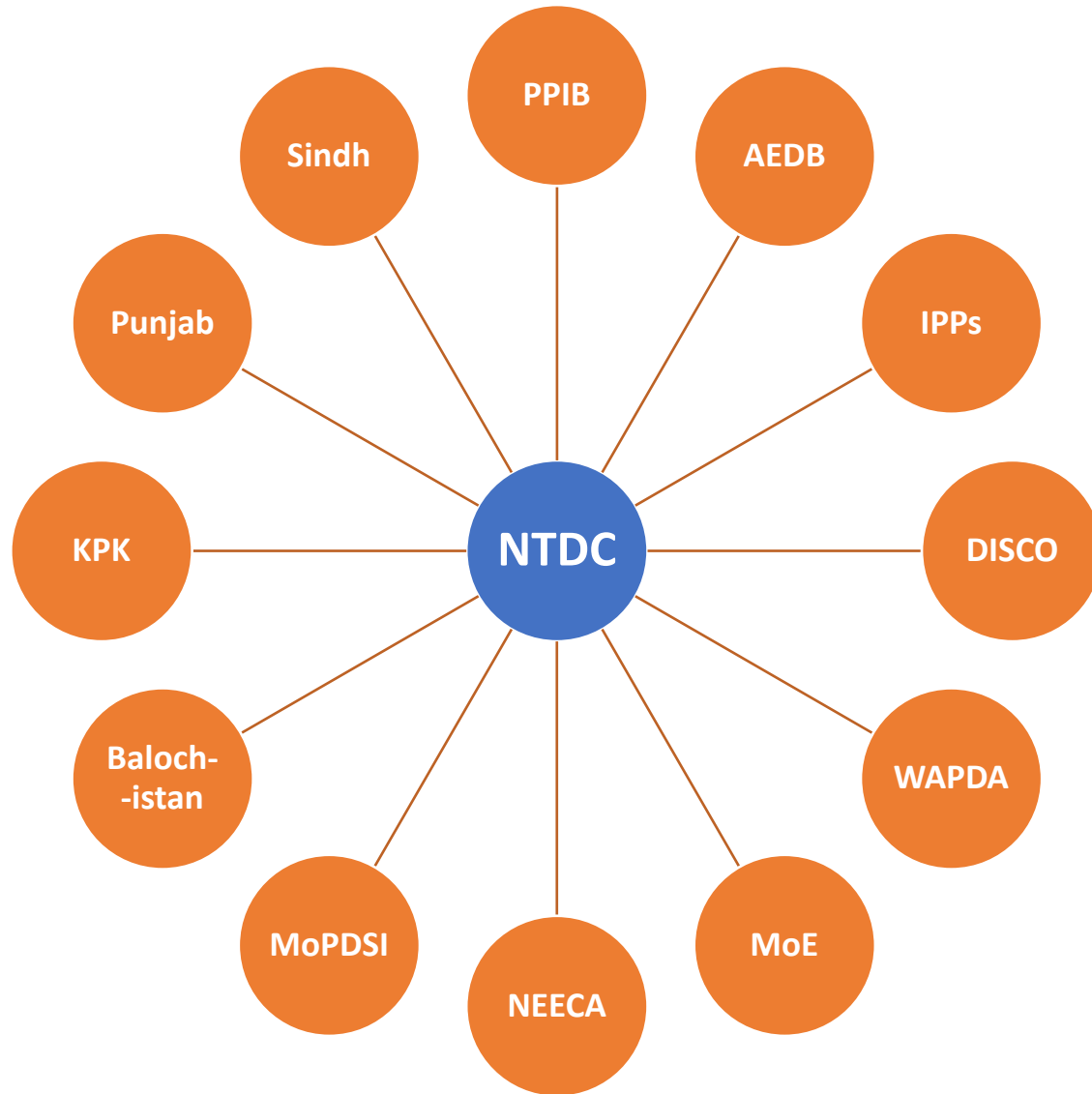
Planning Process in NTDC Grid Code



Planning Timelines as per NTDC Grid Code

- Annual submission of IGCEP [10-year plan] and TSEP [10-year plan] together as “Integrated System Plan” by 30th April each year to the Authority for approval; **[PC 2.1; sub-section (e)]**
- The SO shall share the results of IGCEP with the NGC and other TNOs by 31st December each year to enable them in the timely preparation of TSEP. **[PC 4.2.5]**
- The NGC shall submit this consolidated proposal to the SO as a centralized TSEP not later than 31st March each year. **[PC 4.3.3]**
- Annual preparation of at least 5 years “Transmission Investment Plans” (TIP) based on the approved TSEP for their respective territories and submit to the Authority for the approval; **[PC 2.2; sub-section (e)]**
- Each TNO shall submit its TIP to the Authority for approval in accordance with the Applicable Documents, but no later than three (03) months from the date of approval of the TSEP. **[PC 4.1.1]**

Pakistan LTES Stakeholders and Process



Journey of LTES in Pakistan

Master/Integrated Plans:

- First Master Plan (NPP) was prepared in 1994 by a Canadian Consultant - SNC Lavalin.
- Second Master Plan was prepared in 2005 by a Canadian Consultant.
- Third Master plan (NPSEP) was prepared in 2011 by Canadian Consultant – SNC Lavalin.
- Fourth major Integrated plan was prepared in 2016 by a Japanese Consultant – JICA.

In-house prepared Stand Alone Generation Expansion Plans:

- First IGCEP was submitted to NEPRA on 26th February, 2019.
- Second IGCEP was submitted to NEPRA on 20 Apr. 2020.
- IGCEP 2021 was approved by NEPRA on 24 Sep. 2021.
- IGCEP 2022 was approved by NEPRA on 3 Feb. 2023.
- Revised Grid Code was approved by NEPRA on 22 Mar. 2023.
- ISP (IGCEP and TSEP) is in development stages.

NTDC reduced reliance on international consultants - developed indigenous resources in this journey.

Power Supply Outlook 2022-2031

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REFERENCE SCENARIO

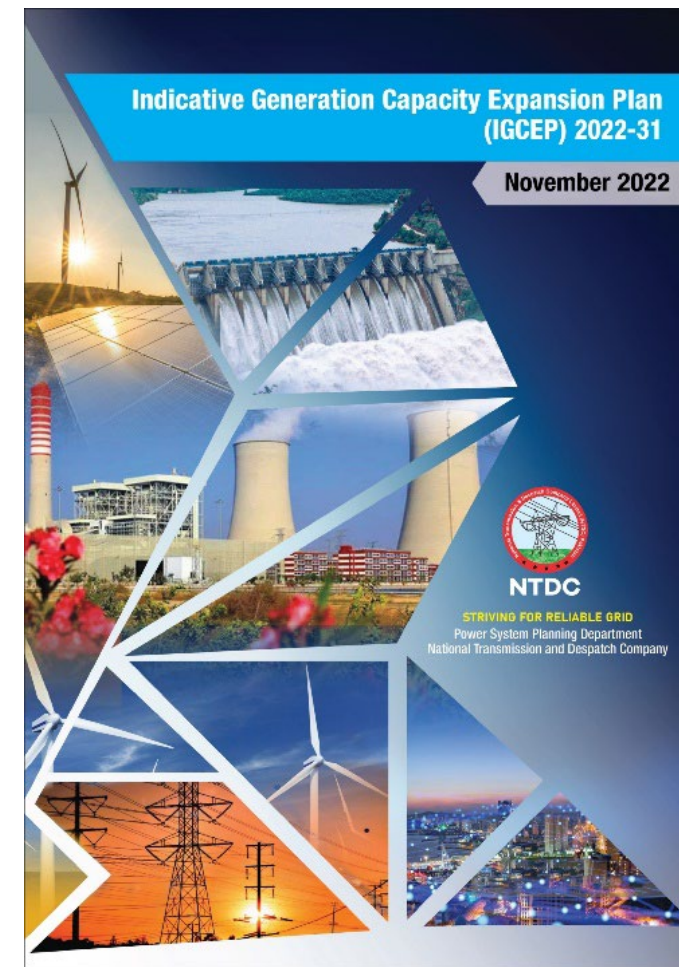
- 40% RE Share in power generation mix by 2025
- 60% RE by 2030

ARE Policy

2

HIGH RE + NUCLEAR + IMP. COAL RETIREMENT

- 70% RE Share in power generation mix by 2031 (IGCEP 2022-31).
- Increase RE above 80% using high indigenous potential of wind, solar and hydro.



Thank you for your attention



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