



RENEWABLES FIRST

Pakistan's Power Market Insights

May 2025



Introduction

Our power market insights highlight important trends shaping Pakistan's power sector. This document focuses on long-term changes, such as the effects of fuel cost variations and shifts in the energy mix. The goal is to help businesses and consumers understand how the power sector is evolving.

Key highlights



In May 25, electricity generation stood at 12.8 TWh, marking a marginal increase of 1% year-on-year (YoY) basis



Hydel led the generation mix with a 38% share, driven by improved water flows at northern hydel plants

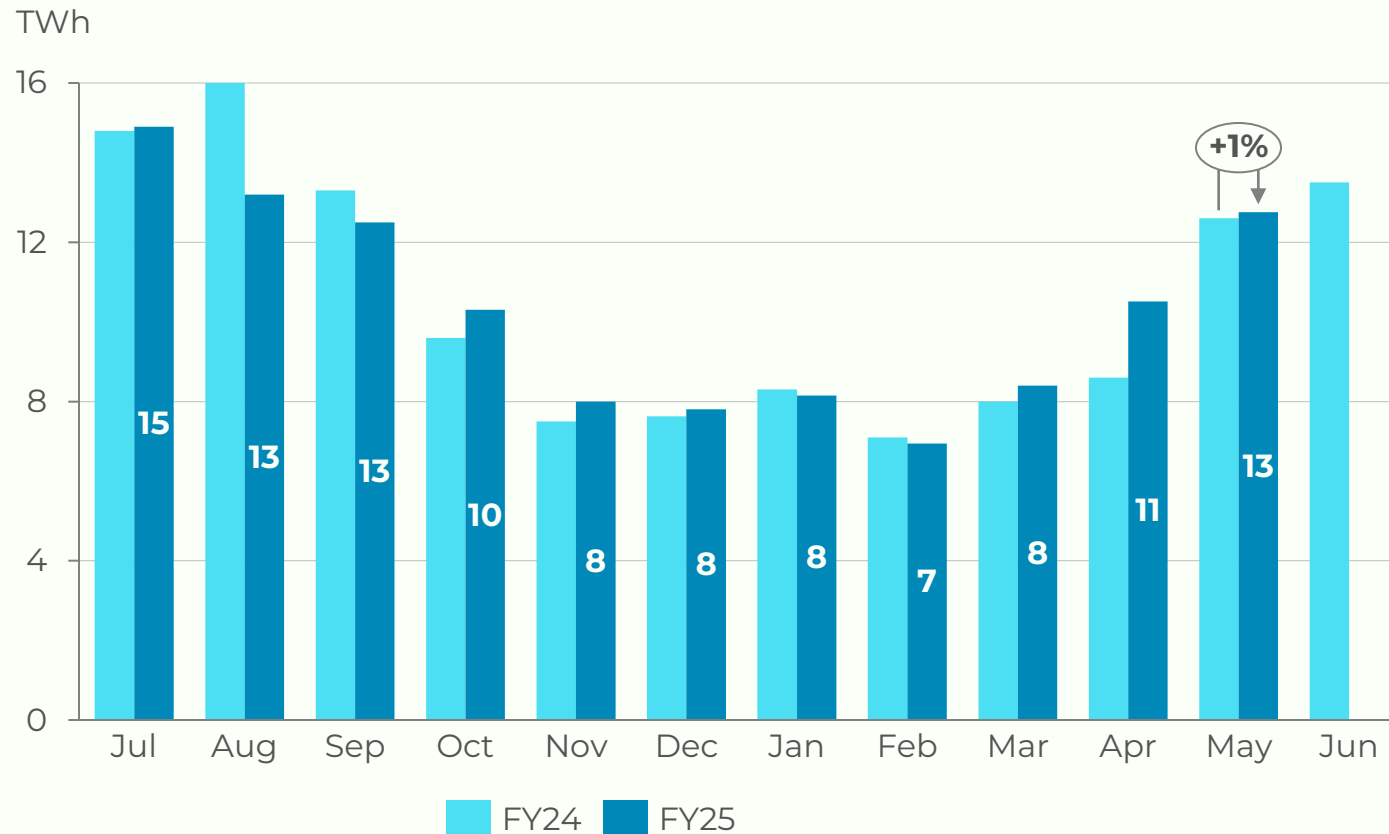


For FY26, the national average power purchase (NAPP) price is set at PKR 25.98 per kWh, reflecting a 4% decline YoY. The base tariff has also been rebased to PKR 34 per kWh, representing a similar 4% YoY reduction

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May 25 recorded electricity generation of 12.8 TWh, reflecting a slight 1% increase compared to May 24

Month-wise electricity generation in FY24 vs FY25

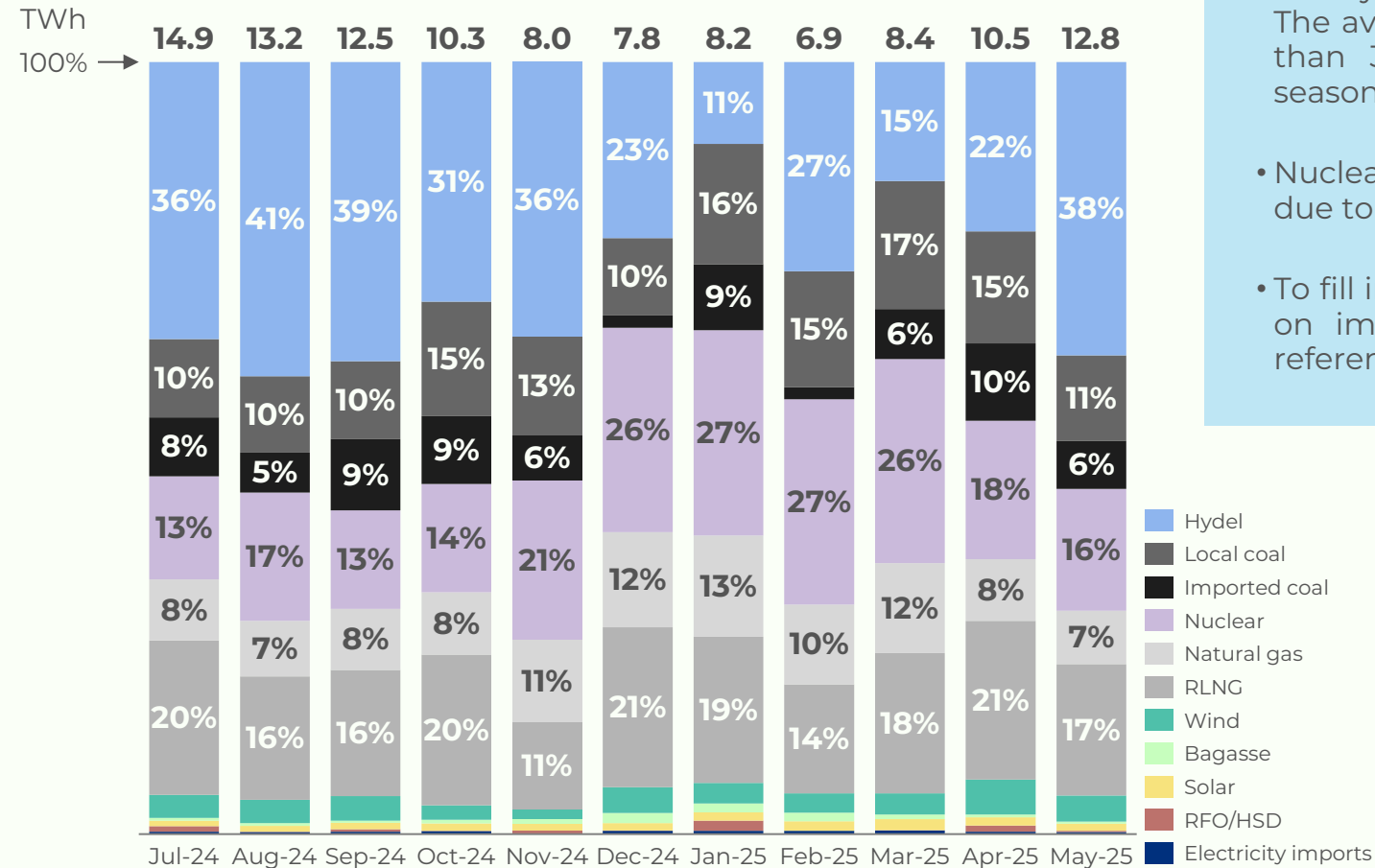


- In May 25, electricity generation rose to 12.8 TWh, up from 12.6 TWh in May 24. The national average temperature was recorded at 31.07°C i.e., +2.12°C above the historical average, contributing to a slight increase in electricity demand.

- During the first eleven months (11M) of FY25, total electricity generation recorded a slight increase of 0.03%, rising from 113.42 TWh in the same period of FY24 to 113.46 TWh in FY25.

In May 25, hydel led the generation mix with a 38% share, supported by improved water inflows

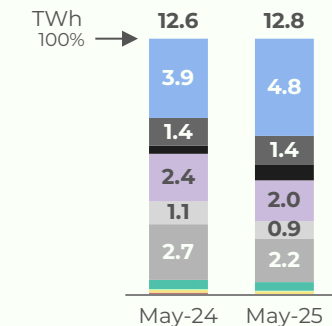
Energy source-wise generation mix in 11M FY25



- In May 25, hydel generation rose by 24% YoY to 4.8 TWh. The average temperature in May 25 was 31.07°C, higher than 30.44°C in May 24, contributing to increased seasonal snowmelt and runoff in northern reservoirs.
- Nuclear generation declined 15% YoY to 2 TWh in May 25 due to refueling of C-1 and K-2.
- To fill in the gap of reduced nuclear generation, reliance on imported coal, and RLNG increased against the reference projections.

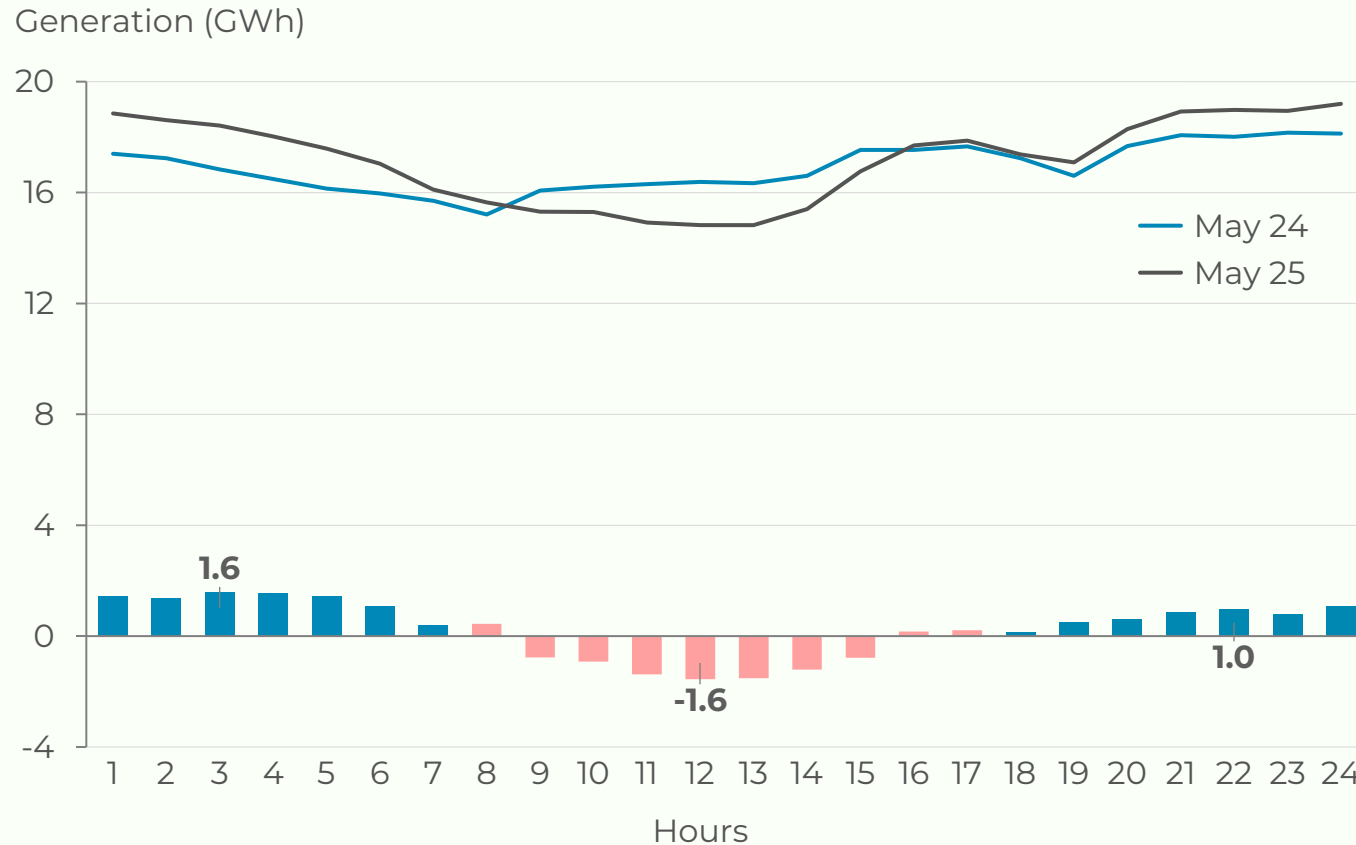
K2: Karachi nuclear power plant unit-2
C-1: Chasma nuclear plant

Source-wise generation mix, May 24 vs May 25



An average decline of 1.6 GWh in grid demand was observed in May 25, suggesting the potential impact of solarization

Avg. monthly hourly generation profiles for the month May 24 vs May 25



- While overall electricity demand slightly increased in May 25, a noticeable mid-day dip suggests a growing shift toward alternative competitive energy sources such as solar.
- Maximum demand in May 25 reached 23 GW, marking a 6% increase from 22 GW compared to May 24. In contrast, minimum demand declined to 7.9 GW from 9.9 GW in the same period last year.

May 25 marks the second consecutive month in a row with a positive fuel cost adjustment

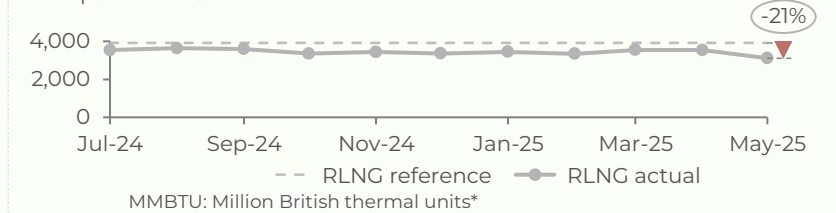
Fuel price adjustments in 11M FY25

PKR / kWh



RLNG projected vs actual rates, FY25

PKR per MMBTU



- In May 25, generation from imported coal stood at PKR 17 per kWh. As generation from imported coal was not included in the reference projection for May 25, this leads to additional fuel costs.
- Natural gas-based generation cost stood at PKR 12.8 per kWh, against projected PKR 10.17 per kWh, contributing to a positive fuel adjustment.
- In May 25, hydel and nuclear accounted for 54% of the generation mix, bringing the cost to the second-lowest in FY25. In Nov 24, 56% hydel and nuclear share, coupled with lower winter demand, led to the lowest generation cost of FY25 at PKR 7.11 per kWh.
- With downward revision in RLNG prices, the positive FCA of PKR 0.1015 per kWh is expected to be adjusted downward by PKR 0.50 per kWh.

Improved generation from northern hydel plants helped reduce transmission and transformation (T&T) losses

T&T losses in 10M-FY25

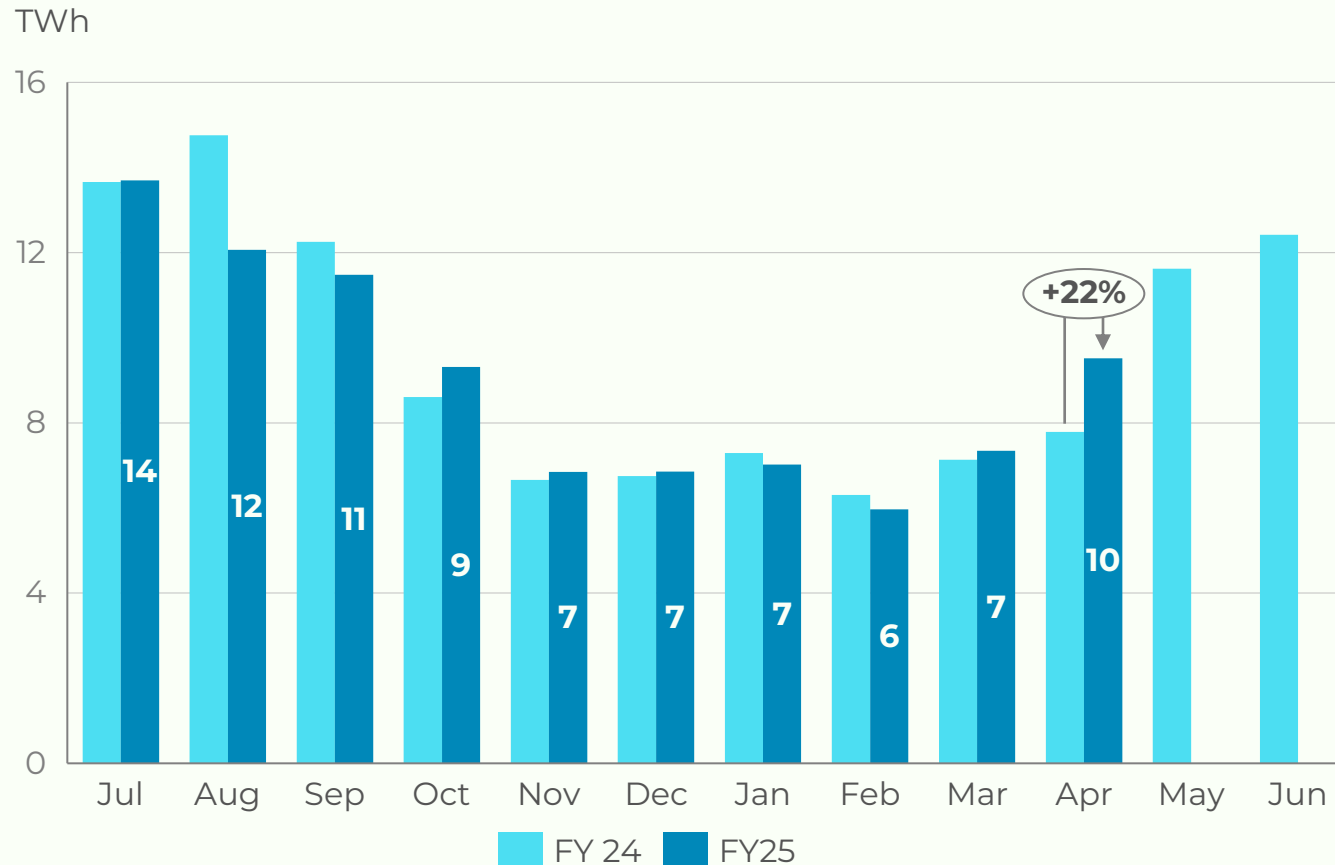
Losses (%)



- During winter, reduced hydel generation in the north increases reliance on southern thermal plants to meet northern load centre demand, leading to higher transmission losses. However, improved hydel generation in April led to a drop in T&T losses to 2.48%, falling below the allowed threshold of 2.64%.
- These 2.48% losses resulted in a loss of 250 GWh in April 25, with an estimated financial impact of PKR 0.95 B. Cumulatively, T&T losses during the first 10 months (10M) of FY25 amounted to PKR 13.3 B.

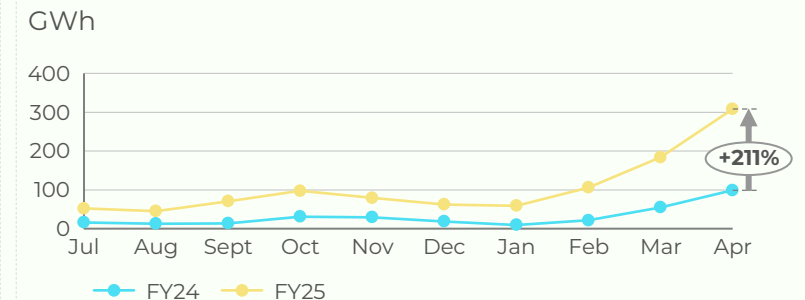
DISCO's electricity procurement saw a slight dip of 1% YoY in the first 10M of FY25

Units procured by DISCOs in FY24 vs. FY25



- In 10M of FY25, DISCOs procured 90 TWh, compared to 91 TWh in 10M of FY24, i.e., 1% YoY drop.
- In Apr 25, higher temperatures along with a reduction in electricity tariff resulted in 22% YoY increase in electricity consumption from 7.8 TWh in Apr 24 to 10 TWh in Apr 25.
- In the first 10M of FY25, net-metering units procurement rose by 248% YoY, from 306 GWh in 10MFY24 to 1,063 GWh in 10MFY25, signaling towards an uptake in rooftop solarization.

Comparison of DISCOs' net-metering units procured, FY24 vs FY25



Power sector tariff setting FY26

Assumed indicators

Electricity demand growth: **2.8%**

Exchange rate (USD): **PKR 290**

US inflation rate: **2%**

Pak inflation rate: **8.65%**

KIBOR: **11%**

SOFR: **4.07%**

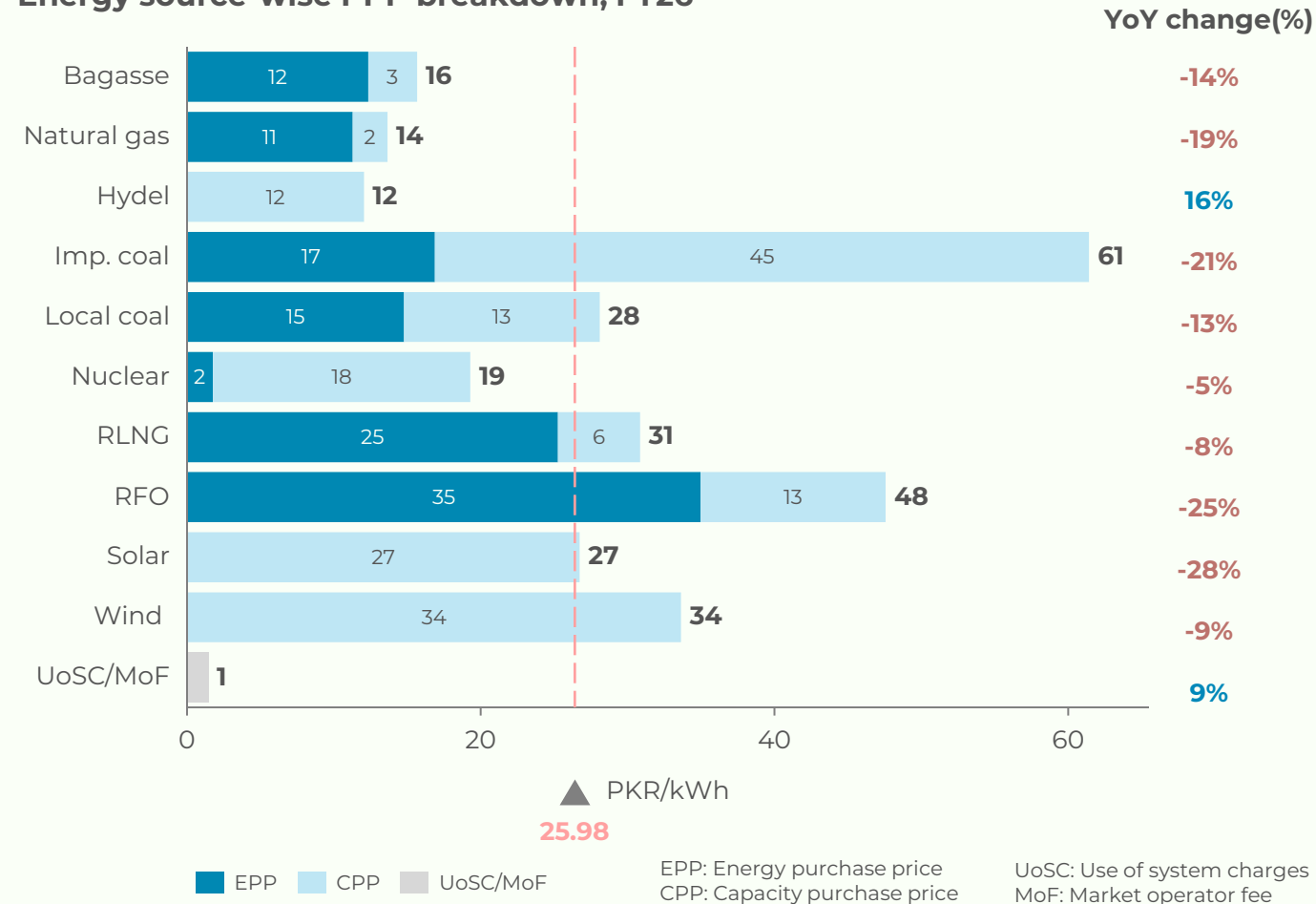
FY26 tariff rebasing results in a PKR 1.51 per kWh cut, bringing the base tariff down to PKR 34 per kWh

Comparison of PPP and DISCOs revenue requirement, FY25 vs. FY26

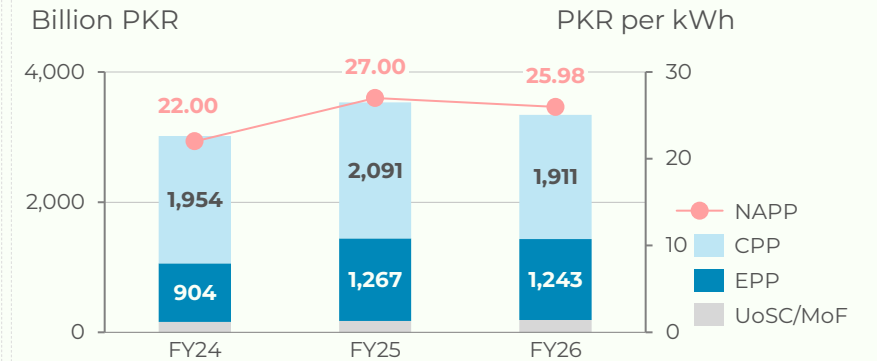
		FY25			FY26			
		PKR Billion	Units (TWh)	PKR per kWh	PKR Billion	Units (TWh)	PKE per kWh	
		135			132			↪ Projected generation
PPP	Capacity charge	2,091		16.0	1,911		14.44	
	Energy charge	1,268		9.7	1,243		9.39	
	UoSC/MoF/Losses	175	-4.1	1.3	188	-3.7	1.46	
		3,534	131	27	3,342	128	25.98	↪ NAPP: National average purchase price
Units	Units allotted for KE	11			12.2			
	Units for XWDISCOS	120			116			
Units to be procured by DISCOs after T&D losses		106			104			Diff.
DISCOs revenue requirement	Capacity charge	1,952		18.4	1,767	-	17.1	-1.34
	Energy charge	1,161		10.9	1,125	-	11.0	-0.07
	UoSC/MoF/Losses	164		1.5	174	-	1.7	0.14
	Distribution Margin	391		3.7	396	-	3.8	0.14
	PYA	100		0.9	59	-	0.6	-0.38
		3,768	106	35.5	3,521	104	34.0	-1.51
								↪ Revised base tariff

The projected PPP decreased by 4% YoY, from PKR 27 per kWh in FY25 to PKR 25.98 per kWh in FY26

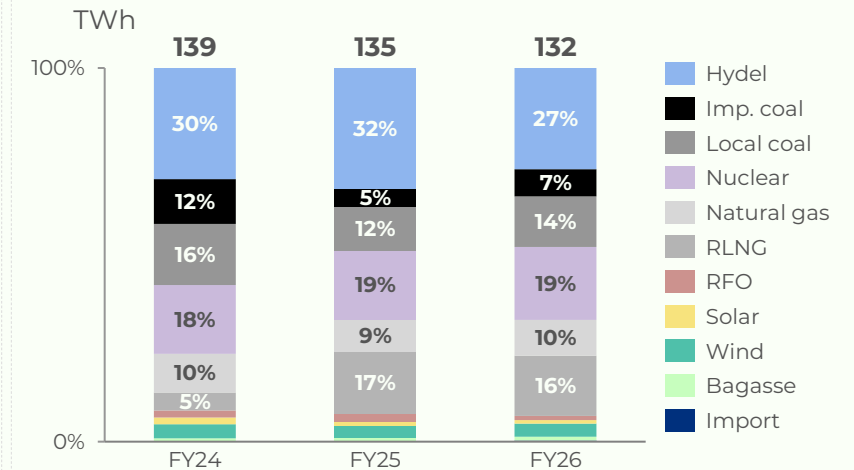
Energy source-wise PPP breakdown, FY26



PPP vs NAPP price, FY24 - FY26

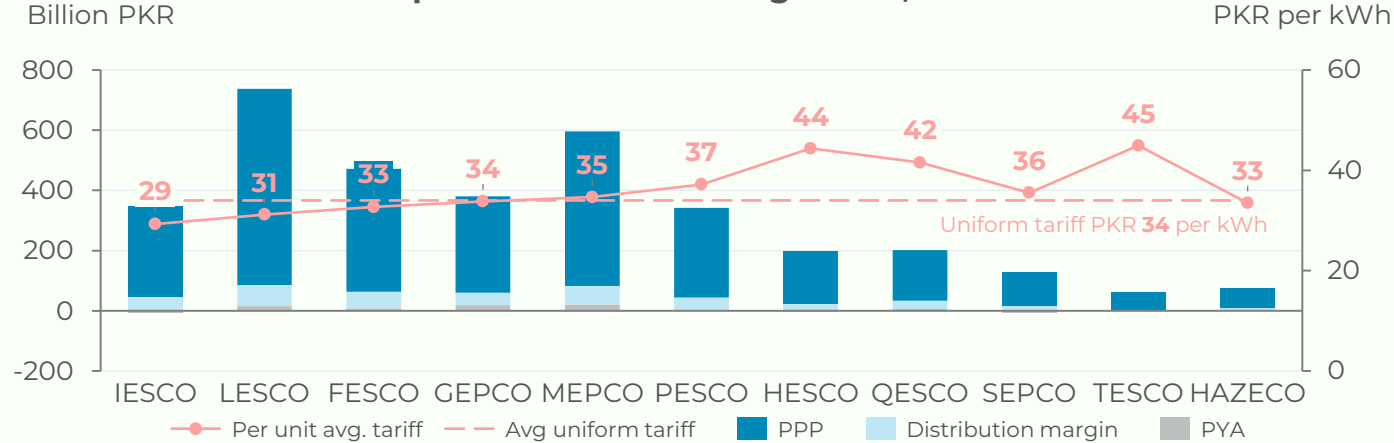


PPP projected generation mix, FY24 - FY26

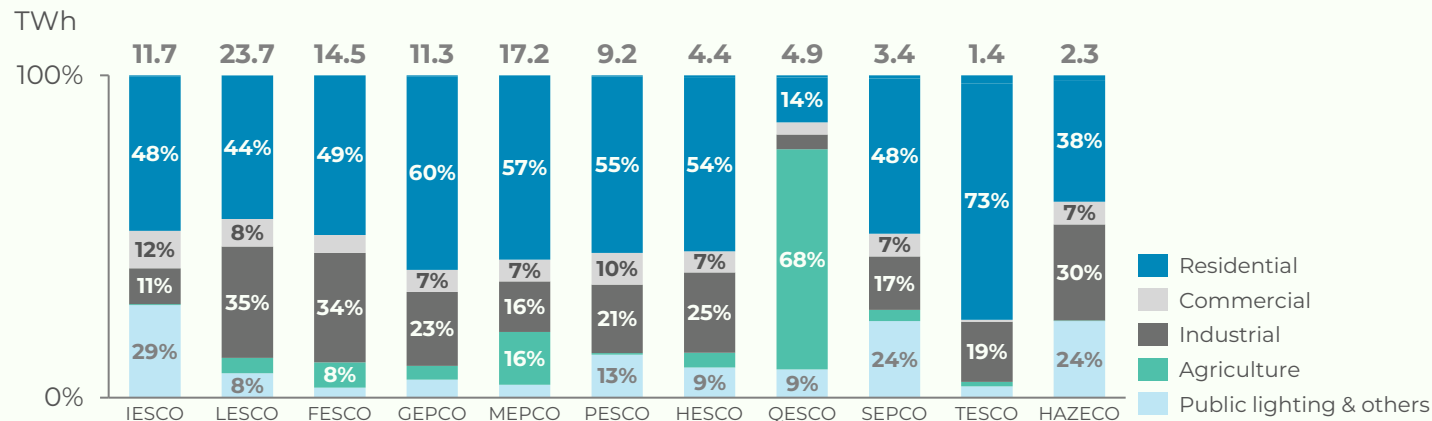


In FY26, uniform tariff is set at PKR 34 per kWh to cover DISCOs projected revenue requirement of PKR 3,521 B

DISCO-wise revenue requirements and average tariff, FY26



DISCO-wise projected units along with consumer categories, FY26



- Under the uniform tariff policy, DISCOs with average tariffs below the uniform rate (e.g., IESCO, LESCO, FESCO) pay the differential, while those with higher tariffs (e.g., PESCO, HESCO) receive subsidies under TDS.
- Compared to the FY25 projection of 106 TWh, projected electricity sales for FY26 have been revised downward to 104 TWh. Notably, DISCOs with higher solar adoption are anticipating lower sales. For instance, PESCO projects a 25% decline in sales, followed by MEPCO and FESCO.

PYA: Prior year adjustment

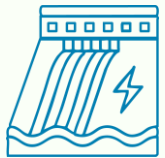
The tariff outlook for FY26 is expected to reflect cost pressures driven by changing consumption patterns



For FY26, electricity demand growth has been projected at 2.8%, aligned with the country's anticipated GDP growth of 3.6% as per International Monetary Fund (IMF) estimates. However, grid-based electricity sales have already declined for two consecutive years, largely due to the rising adoption of rooftop solar, both behind-the-meter and net-metered systems. With further solar installations expected in FY26, grid sales are likely to continue their downward trend, potentially falling short of projections.



Lower-than-projected generation results in underutilization of committed capacity, causing fixed payments to be spread over fewer units. This drives up per-unit cost and puts upward pressure on quarterly adjustment charges for consumers.



Due to low hydrology projections, hydel's share in the generation mix is expected to decline from 32% in FY25 to 27% in FY26, raising the per-unit cost of hydel electricity from PKR 10.4 to PKR 12 per kWh. This upward shift will significantly impact the overall PPP price, given hydel's dominant role in the generation mix. Meanwhile, the share of coal (both local and imported) is projected to rise from 17% in FY25 to 21% in FY26, aiming to reduce reliance on the volatile RLNG market and its associated supply chain risks.



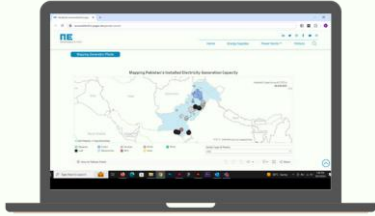
The 49% reduction in TDS for FY26, bringing it down to PKR 249 billion, shifts a greater financial burden onto more efficient DISCOs, which must now compensate for the inefficiencies of those with weaker sales and poor recovery performance.



The reduction of the base tariff from PKR 34 to PKR 31.59 per kWh, enabled by the PKR 249 B TDS, may stimulate a marginal increase in electricity consumption. However, after incorporating various taxes and surcharges on each unit, the effective cost of electricity from the national grid remains high, making it less competitive compared to increasingly affordable solar.

For more power sector-related insights, visit:

[Pakistan Energy and Climate Insights Dashboard](#)



www.peci.renewablesfirst.org

PECI, an initiative of Renewables First, is an innovative platform that consolidates fragmented energy data from various agencies, supporting informed decision-making across Pakistan's energy sector. By centralizing critical energy and climate data, PECI improves accessibility and clarifies environmental impacts and emissions for stakeholders. RF's collaboration with Herald Analytics led to the development of the PECI Dashboard, which drives insights and offers robust analytics for energy data.

[Pakistan Electricity Review 2025](#)



https://uploads.renewablesfirst.org/Pakistan_Electricity_Review_2025_80753f62aa.pdf

The Pakistan Electricity Review 2025 report aims to improve technical accessibility and awareness of critical aspects of power generation, transmission, and consumption. It presents a comprehensive analysis of key trends and challenges that shaped Pakistan's power sector during the fiscal year 2024 (FY24). The report utilizes publicly available data for the power sector, with NEPRA's state of industry report (SIR) serving as primary data source.

Renewables First (RF) is a think tank for energy and environment. Our work addresses critical energy and natural resource issues with the aim to make energy and climate transitions fair and inclusive.

Disclaimer:

All the information and analysis provided in this document are accurate and to the best of our knowledge and understanding. In case you identify any errors, please email:

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