

Past Brothers' Power Sector Has Similar Symptoms-B

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Bangladesh Electricity

- Structural Measure: 2022 amendment to Bangladesh Energy Regulatory Commission (BERC) act now allows the government to fix energy prices under "special circumstances" without BERC involvement.
- Tiered pricing system is:
 - 0-50 units = 4.63 Taka/kWh
 - 0-75 units = 5.26 Taka/kWh
 - 76-200 units = 7.20 Taka/kWh
 - 201-300 units = 7.59 Taka/kWh
 - 301-400 units = 8.02 Taka/kWh
 - 401-600 units = 12.67 Taka/kWh
 - Above 600 units = 14.61 Taka/kWh

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Pakistan Electricity

- Electricity consumption has dropped by 7-13pc.
- On June 14, Nepra already announced almost a 20pc (Rs5.72 per unit) increase in the uniform national tariff to ensure about Rs3.8 trillion in funds to the 10 Discos during the fiscal year 2024-25.
 - This tariff hike, effective July 1, 2024, affects all ex-Wapda distribution companies (Discos) and K-Electric.
 - The measure is part of the International Monetary Fund's (IMF) "prior action and structural benchmark," and the public hearing is just a formality.
 - Proposed tariff would generate Rs3.5tr to 10 Discos during the current fiscal year, about Rs 580bn higher than last year.
 - After the impact of 18pc GST, the total revenue would reach around Rs4.2tr in addition to any further adjustments in the shape of monthly fuel charges and quarterly tariff adjustments for exchange rate, inflation and other factors.
- The power purchase price (PPP) includes fuel and variable O&M (operation and maintenance) costs and capacity charges including the use of service charges, market operator fee, etc.
 - Capacity charges work out as around 65pc of the total projected PPP whereas energy cost is around 35pc.

- Average per-unit power purchase price of Discos on a unit-purchased basis — i.e. before the adjustment of allowed transmission and dispatch losses of Discos — capacity charges works out as Rs17.66 per unit.
- Whereas energy charges are Rs9.69 per unit, totaling Rs27.35 per unit for 2024-25 for national average power purchase price of around at Rs27 per unit.
- Note: 2019 June Dollar Rate was Rs 156.7 vs IGCEP 2023-24 is based on Rs. 289.1 (Oct 2023).
- After adding losses and distribution margins, the average tariff goes up to Rs35.50 per unit against Rs27.78 for last year. .
- After addition of 18pc **general sales tax**, the average base tariff for next year would jump to Rs42 per unit excluding other taxes, duties and surcharges.
 - This figure does not include any adjustments related to monthly fuel and quarterly tariff adjustments.
- Real applicable average tariff would now stand between Rs65 and 72 per unit **after inclusion of surcharges, taxes, duties and levies** besides monthly and quarterly adjustments.
 - The average national tariff is expected to be even much higher for consumers than the industrial sector, for which the prime minister announced Rs10.69 per unit cut, with a negative revenue impact of Rs200bn.
 - This amount would now stand transferred to domestic, commercial, bulk power consumers, etc unless paid from the PSDP reduction as announced by FM.
- *Analysis shows* 15.5 million “protected consumers” using up to 50 and 100 units per month pay Rs. 3.95 and Rs. 7.74 (lifeline) and Rs 10.06 using up to 200 units per month.
- 5.95 million “unprotected category” pay Rs 16.48 per unit for the first 100 units
- Another 5 million consumers fall pay Rs 22.95 for the next 101-200 units and Rs. 27.14 for 201-300 slab
- Therefore, 26.45m consumers pay below cost of electricity
- The consumers of the next five household categories from 301 units and above pay Rs 32.03 - 42.72 per unit.
 - Subjected to fixed capacity charge of Rs 200-1,000 per KW.
 - This fixed charge would be Rs 400 and gradually increase to Rs 5,000 per month depending on the sanctioned load capacity.
 - Likewise, agricultural consumers would be subjected to a fixed capacity charge of Rs 400 per kilowatt, and their tariff increase would range between about Rs5.75 to Rs6.59 per unit).

- All other consumer categories — commercial, general services, industrial and bulk — would be subjected to Rs1, 250 per kilowatt fixed capacity charge compared to the existing rate of Rs. 400-500 per kilowatt.
- On top of this capacity charge increase, commercial and general services tariff would increase by Rs5.89 per unit.
- Industrial tariff for B1 category would reduce by Rs 2-2.65, equivalent for 301-400 unit consumer!
- The off-peak rate for all other industries exceeding 25-kilowatt capacity would increase by Rs 2.64 to Rs3.56 per unit
 - The peak rates would remain unchanged.
- The average national base tariff, including for K-Electric, has now been worked out at Rs35.50 per unit for the next fiscal year, against Rs29.78 per unit for the current year.
 - This would yield about Rs3.763tr in revenue to 10 Discos this fiscal year, compared to Rs3.28tr last year.
 - After adding the cost of losses and distribution margins, the average tariff rises to Rs35.50 per unit.
 - The real, applicable average national tariff would now be between Rs65 and Rs72 per unit after including surcharges, taxes, duties, and levies, as well as monthly and quarterly adjustments.
- By the year 2023, total number of electricity consumers in the country reached to 38,249,950 and consumed 121,852.01 GWh out of which 43.92 % was consumed by 33,115,996 domestic consumers, 7.3 % was consumed by 4,095,967 in commercial category, 25.51% was consumed by 397685 industries, 7.91% was by 377,255 agriculture consumers and 15.38% by other 263,047 consumers per State of Industry Report 2023.
- Tariff Residential
 - For those surpassing 200-unit limit, consumers must wait 6 months before they can revert to the [protected category](#). Additional fixed taxes and surcharges are applied to non-protected consumers

- Two options are circulating

PROTECTED	CONSUMERS RS./KWH	CURRENT RATES RS./KWH		JUL-24 EXPECTED RS./KWH		JAN-25 EXPECTED RS./KWH	
		W/O TAXES	W TAXES	W/O TAXES	W TAXES	W/O TAXES	W TAXES
		UP TO 50 UNITS - LIFE LINE	1,031,293	3.95	4.74	3.95	4.74
51-100 UNITS - LIFE LINE	293,330	7.74	9.28	7.74	9.28	7.74	9.28
01-100 UNITS	10,106,443	15.72	19.37	16.03	19.75	11.69	14.54
101-200 UNITS	5,447,475	18.04	22.16	18.50	22.71	14.16	17.50
UNPROTECTED							
01-100 UNITS	5,954,366	24.46	33.22	27.93	37.38	23.59	32.18
101-200 UNITS	2,315,675	30.93	40.98	34.41	45.15	30.07	39.94
201-300 UNITS	2,210,975	35.12	46.00	38.60	50.17	34.26	44.97
301-400 UNITS	594,066	40.01	51.87	44.60	56.73	39.72	51.52
401-500 UNITS	193,731	43.22	55.72	46.58	59.76	42.24	54.55
501-600 UNITS	78,418	44.64	57.42	48.58	61.70	43.87	56.50
601-700 UNITS	36,720	45.78	58.79	49.49	63.24	45.15	58.03
ABOVE 700 UNITS	59,498	50.70	64.69	54.51	69.27	50.17	64.06

Note:-
1- The July 24 expected rates would be changes to reflect changes in QTA and FCAs for Aug 2024 to December 2024.

- And **Protected Tariff**

- Units/Per Month

- For 50 units (life line)

- From 51 to 100 units (life line)

- From 001 to 100 units

- From 101 to 200 units

- Units/Per Month

- Rs. 3.95

- Rs. 7.74

- Rs. 7.74

- Rs.10.06

- **Un-protected**

- 1 to 100 ○ Rs. 16.48
- 101 to 200 units ○ Rs. 22.95
- 201 to 300 units ○ Rs. 27.14
- 301 to 400 units ○ Rs. 32.03
- 401 to 500 units ○ Rs. 35.24
- 501 to 600 units ○ Rs. 36.66
- 601 to 700 units ○ Rs. 37.80
- Above 700 units ○ Rs 42.72

Cost of 197 units: $100 \times 7.74 + 97 \times 10.06 = \text{Rs } 1749.82$

Cost of electricity:	1749.82
F.C Surcharge:	636.31
Electricity Duty:	26.25
TV Fee:	35
GST:	410.10
N.J Surcharge:	19.7
Total Estimated Bill:	2877.18

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The Debate

- As of June 30, 2023 Pakistan's *installed* capacity stands at **45,885 MW** (CPPA-G 42,362 MW), *dependable* generation capacity is **43,749 MW** (CPPA-G 40,628 MW and (KE 3,121 MW).
 - This capacity consists of 25,490 MW of thermal generation (GENCOs, IPPs, and SPPs), hydroelectric of 10,635 MW, wind power 1,838 MW, solar energy 530 MW, biomass (bagasse) generating 249 MW, and nuclear power adding 3,620 MW.
 - KE's own thermal generation capacity is 2,816 MW falls short to meet current demand of its system. KE procures electricity: 366 MW from thermal IPPs, 100 MW from solar potential, 139 MW from SPPs/CPPs, and approximately 1,100 MW sourced from the CPPA-G System to bridge the gap.
- Our *generation capability* is **30,574 MW** in CPPA-G with peak demand of 23,679MW (6,895 MW surplus); in KE System it is **3,409 MW** and 3,654MW, respectively (deficit 245MW).
 - Globally, target for reserve margin, which is the amount of unused available capability of an electric power system (at peak load for a utility system) as a percentage of total capability, is ~20 percent, according to experts.
- During FY 2022-23, utilization factor of de-rated thermal electric power generation capacity remained 34.68%; of total circular debt of Rs 5.4 trillion; of which Rs 3.2 trillion is on account of electricity generation and of which Rs 2 trillion is capacity payments to IPPs.
- According to estimates, in financial year 2022–23, around 15 to 30 percentage was electricity pilferage valued at Rs 380 billion; estimated in FY 2023 -24, up to Rs 520 billion
- 24 primarily hydel power generation projects (7,460 MW) is being facilitated by PPIB
 - Year No. of IPPs: Fuels Power Generation (MW) Total
 - 2024 3 IPPs: Fuel: Bagasse, Solar, Hydel (32+100+884) for total of 1,016MW
 - 2025 6 IPPs: Solar, Hydel, Imp Coal (132+7+300) 439MW
 - 2026 3 IPPs: Wind, Hydel (100+8) 108MW
 - 2028 1 IPP: Thar Coal 1,320 MW
 - 2029 1 IPP: Hydel 82 MW
 - 2030 1 IPP: Hydel 701 MW
 - 2031 3 IPPs: Hydel 1,556 MW
 - 2032 1 IPP: Hydel 640 MW
 - Projects in Process- 5 IPPs: Hydel, Gas (1578+20) 1,598 MW

- Gestation of thermal 5-7 years, hydel and nuclear can range from 8-10 years and it is to be noted that by 2034
 - NTDC's 7228 MWs are to be retired (2020MWs of GENCOs, 1300MWs of KAPCO operating due network constraints and 3908 MWs due to PPA expiry)
 - Retirement plan is in 2027 of 2723MWs, 2028 of 235MWs, 2029 of 1177MWs, 2030 of 167MWs, 2031 of 743MWs, 2033 of 450MWs, and 2034 of 1733MWs.
 - And 1102 MWs of KE due PPA expiry (2025 682MWs, 210 MWs each in 2027 and 2033)