Power DISCOs

Sector Overview

January 2019

Power DISCOs | Snapshot

- 22 licensed Power DISCOs operating in Pakistan
- 10 Public DISCOs and K-Electric serve almost entire customer base
- Transmission network includes 17,293 KMs long lines, including K-Electric network, operating at 500 kV and 220 kV level
- Distribution network of NTDC includes 359,930 KMs High Tension (HT) lines and 232,042 KMs long Low Tension (LT) lines, including K-Electric

Challenges

- **T&D losses**
- **Circular debt**

Infrastructural reforms including significant CAPEX would help in resolving the key challenges

Developments

- **Multi-year tariff (MYT) Regime**

  MYT being performance based tariff will require DISCOs to achieve certain targets of performance over the control period to receive revenue streams based on known tariffs

Power DISCOs | Snapshot

as at June 30, 2017

Type of DISCOs	Number of Licenses	Number of Customers
Public Sector DISCOs	10	25,587,660
Private Sector DISCOs	3	2,449,160
Small & Captive Power Producers	10	54
Total	**23**	**28,036,874**

Private Sector DISCOs include K-Electric and Bahria Town

Number of Consumers	Domestic	Commercial	Industrial	Agricultural	Others	Total
FY17	23,937,200	3,362,034	356,913	326,143	15,509	27,997,799
Growth	5%	3%	3%	1%	2%	5%
FY16	22,799,179	3,258,918	346,442	323,696	15,160	26,743,395
Growth	4%	3%	3%	1%	2%	4%
FY15	21,843,609	3,162,837	335,729	320,569	14,793	25,677,537
Growth	4%	3%	3%	2%	2%	4%
FY14	20,972,698	3,073,239	325,752	312,988	14,523	24,699,200
Growth	3%	2%	3%	3%	1%	3%
FY13	20,373,680	3,003,141	317,311	303,731	14,346	24,012,209
Growth	4%	2%	3%	5%	3%	4%
FY12	19,637,543	2,939,214	306,930	288,823	13,967	23,186,477
Growth	4%	2%	5%	2%	-4%	3%

Units Consumed (GWh)
FY17: 163,102
FY16: 89,295

Power DISCOs | Existing Transmission Network

Years	Trans. Lines* (KMs) NTDC	K-Electric	Total (KMs)
FY17	16,295	1,250	17,545
FY16	15,616	1,249	16,865
FY15	15,011	1,249	16,260
FY14	14,287	1,248	15,535
FY13	13,502	1,248	14,750
FY12	13,026	1,248	14,274

** Includes 500KV and 220KV lines of NTDC and 220KV, 132KV, and 66KV of KE network*

- Hydrogenation is mainly in Northern part of the country.
- Major thermal generation is in South & lower middle part of the network.
- Bulk Power flows from North to mid-country in summer.
- Bulk power flows South to mid-country & North in winter.

KV	No of Grid Stations	Transmission Lines	MVA Capacity
500 KV	16	5,772	20,850
220 KV	41	10,523	28,290
Total	57	16,295	49,140

Power DISCOs | Ongoing Transmission Projects

Grid Stations & Transmission Lines		
Sr. No	**Province**	**No of Projects**
1	Balochistan	7
2	Sindh	14
3	Punjab	16
4	KPK	15
5	AJK	5
Total Projects		***57***

- Timely completion of projects is critical and of paramount importance.
- NTDC – important role to play in coming years to ensure evacuation and transmission across the country.
- During 2017/18-2021/2022, NTDC has planned to commission 8 new grid stations (500kV) of 3,500kms & 22 new grid stations of (220Kv) of 2,500kms.
- Mega Project under CPEC : +660 HVDC Matiari-Lahore Transmission line project on (BOOT) basis for 25 years. (COD: March 2021; 878 kms with 4000 MW transmission capacity)

Power DISCOs | Distribution Network

Years	Distribution Lines* (KMs) NTDC	Distribution Lines* (KMs) K-Electric	Total HT Lines KMs	Total LT Lines KMs
FY17	349,652	10,278	359,930	232,042
FY16	339,458	10,158	349,616	228,573
FY15	341,051	9,744	350,795	242,600
FY14	336,941	9,245	346,186	240,909
FY13	332,046	8,981	341,027	221,187
FY12	322,352	8,712	331,064	217,485

**Includes 132KV, 66KV, 33KV, 11KV lines*

DISCOs | T&D Losses | Trend

FY17

	KPIs	Description	IESCO	FESCO	GEPCO	LESCO	MEPCO	K-Electric	QESCO	HESCO	TESCO	PESCO	SEPCO	Pakistan
FY17	T&D Loss	Actual - Unit Lost (GWhs)	955	1,359	1,001	2,839	2,698	4,371	1,336	1,648	223	4,079	1,701	
		Actual Loss (%)	9.03	10.57	10.23	13.77	16.91	25.19	23.08	30.75	15.40	32.60	37.90	17.95%
		Allowed by NEPRA (%)	9.39	9.50	9.98	11.75	15.00	15.00	17.50	20.50	20.00	26.00	27.50	
		Delta (%)	(0.36)	1.07	0.25	2.02	1.91	10.19	5.58	10.25	(4.60)	6.60	10.40	

FY16

	KPIs	Description	IESCO	FESCO	GEPCO	LESCO	MEPCO	K-Electric	QESCO	HESCO	TESCO	PESCO	SEPCO	Pakistan
FY16	T&D Loss	Actual - Unit Lost (GWhs)	878	1,220	957	2,810	2,430	4,440	1,327	1,346	241	3,967	1,589	
		Actual Loss (%)	9.10	10.24	10.58	13.94	16.45	25.66	23.92	26.46	18.96	33.76	37.87	17.95%
		Allowed by NEPRA (%)	9.39	9.50	9.98	11.75	15.00	15.00	17.50	20.50	20.00	26.00	27.50	
		Delta (%)	(0.29)	0.74	0.60	2.19	1.45	10.66	6.42	5.96	(1.04)	7.76	10.37	

IESCO & TESCO are the most efficient DISCOs having less than allowed T&D losses

DISCOs | Recovery | Trend

FY17

	KPIs	Description	IESCO	FESCO	GEPCO	LESCO	MEPCO	K-Electric	QESCO	HESCO	TESCO	PESCO	SEPCO	Pakistan
FY17	Recovery	Actual - Units Billed (GWhs)	9,628	11,499	8,778	17,783	13,253	81,551	4,453	3,712	1,227	8,432	2,788	163,102
		Amount Billed *(PKR mln)*	124,084	139,585	105,815	233,501	147,641	1,011,381	63,948	48,253	14,697	98,439	35,417	2,022,761
		Amount Recovered *(PKR mln)*	113,996	135,732	101,572	231,633	142,045	910,647	27,849	45,203	12,184	87,896	38,952	1,847,711
		Loss (%)	8.13	2.76	4.01	0.80	3.79	9.96	56.45	6.32	17.10	10.71	(9.98)	7.3

FY16

	KPIs	Description	IESCO	FESCO	GEPCO	LESCO	MEPCO	K-Electric	QESCO	HESCO	TESCO	PESCO	SEPCO	Pakistan
FY16	Recovery	Actual - Units Billed (GWhs)	8,774	10,700	8,089	17,342	12,341	12,864	4,220	3,739	1,028	7,783	2,415	89,295
		Amount Billed *(PKR mln)*	113,522	133,336	96,437	233,501	141,677	209,687	55,339	49,009	4,692	91,672	36,104	1,164,979
		Amount Recovered *(PKR mln)*	103,464	133,416	95,868	231,633	141,663	183,770	39,634	35,331	20,504	81,121	19,922	1,086,327
		Loss (%)	8.86	(0.06)	0.59	0.80	0.01	12.36	28.38	27.91	(336.97)	11.51	44.82	5.5

The actual level of recovery improved to 93% for the year FY16 (FY15: 89%)

DISCOs | Performance Ranking

		2016-2017
Sr. No	**Name of DISCO**	**Ranking Position**
1	IESCO	1st
2	GEPCO	2nd
3	MEPCO	3rd
4	FESCO	4th
5	LESCO	5th
6	K-Electric	6th
7	PESCO	7th
8	HESCO	8th
9	QESCO	9th
10	SEPCO	10th

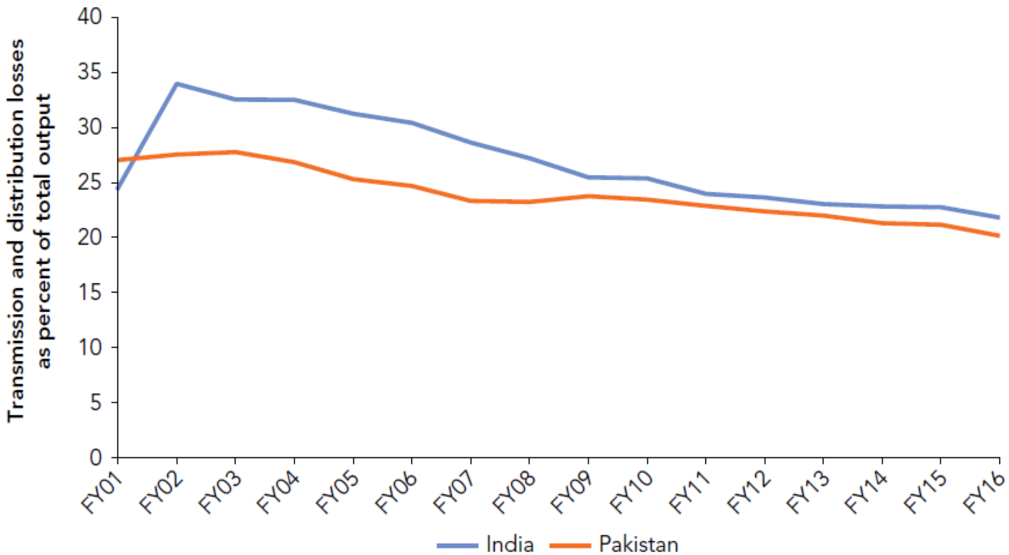
- Performance ranking of Distribution Companies was carried out on the basis of data pertaining to T&D Losses, Recovery, Time Frame for new connection and safety.
- Losses in transmission and distribution add to the shortages
- India and Pakistan lose about a quarter of electricity in the network for both technical and commercial reasons, well above the 10 percent international norm.

Circular Debt | Receivable Position

Receivables (PKR bln)						
Entity	**Sep-18**	**Jun-18**	**Jun-17**	**Jun-16**	**Jun-15**	**Jun-14**
PSO	236	246	213	180	181	175
OGDCL	179	164	119	111	121	101
PPL	160	143	99	57	59	50
Attock Petroleum & Shell	22	20	13	9	9	16
Total	**597**	**573**	**444**	**357**	**370**	**342**

- In India and Pakistan, hefty losses of electricity in distribution, along with poor recovery of overdue electricity bills, have given rise to alarming levels of debt in the sector and prompted repeated government bailouts.

FIGURE 8 Distribution utilities in India and Pakistan incur high electricity losses



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Note : All year wise Electricity Statistics of Pakistan relate to Fiscal Year (which starts from July 2016 and ends in June 2017)

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