

# Power DISCOs

## *Sector Overview*



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# Power DISCOs | Snapshot

- 23 licensed Power DISCOs operating in Pakistan
- 10 Public DISCOs and K-Electric serve almost entire customer base.
- Transmission network includes 17,351 KMs long lines, including K-Electric network, operating at 500kV and 220 kV level.
- Distribution network of NTDC includes 374,212 KMs High Tension (HT) lines and 254,096 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

Type of DISCOs	Number of	
	Licenses	Customers
Public Sector DISCOs	10	26,996,545
Private Sector DISCO	1	2,583,435
Small & Captive Power Producers	12	26,833
<b>Total</b>	<b>23</b>	<b>29,606,813</b>

*Private Sector DISCO include K-Electric.*

	Number of Consumers *					Total
	Domestic	Commercial	Industrial	Agricultural	Others	
<b>FY18</b>	25,297,308	3,491,724	360,500	318,398	112,050	29,579,980
<b>Growth</b>	6%	4%	1%	-2%	622%	6%
<b>FY17</b>	23,937,200	3,362,034	356,913	326,143	15,509	27,997,799
<b>Growth</b>	5%	3%	3%	1%	2%	5%
<b>FY16</b>	22,799,179	3,258,918	346,442	323,696	15,160	26,743,395
<b>Growth</b>	4%	3%	3%	1%	2%	4%
<b>FY15</b>	21,843,609	3,162,837	335,729	320,569	14,793	25,677,537
<b>Growth</b>	4%	3%	3%	2%	2%	4%
<b>FY14</b>	20,972,698	3,073,239	325,752	312,988	14,523	24,699,200
<b>Growth</b>	3%	2%	3%	3%	1%	3%
<b>FY13</b>	20,373,680	3,003,141	317,311	303,731	14,346	24,012,209
<b>Growth</b>	4%	2%	3%	5%	3%	4%

- Rising trend in domestic number of consumers since FY13, however currently domestic consumers are ~25mln out of ~200mln population.
- Growth in commercial and industrial consumers less than domestic consumers.
- Agricultural consumers decreased by ~2% in FY18.

\* Excluding small and captive power producers

# Power DISCOs | Existing Transmission Network

Years	Trans. Lines* (KMs)		Total (KMs)
	NTDC	K-Electric	
<b>FY18</b>	16,096	1,255	17,351
<b>FY17</b>	16,295	1,250	17,545
<b>FY16</b>	15,616	1,249	16,865
<b>FY15</b>	15,011	1,249	16,260
<b>FY14</b>	14,287	1,248	15,535

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

- Hydrogeneration 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.

\* Quoted by NTDC

# Power DISCOs | Distribution Network

Years	Distribution Lines* (KMs)		Total HT Lines	Change	Total LT Lines	Change
	NTDC	K-Electric	KMs	%	KMs	%
FY18	363,747	10,465	374,212	4%	254,096	10%
FY17	349,652	10,278	359,930	3%	232,042	2%
FY16	339,458	10,158	349,616	0%	228,573	-6%
FY15	341,051	9,744	350,795	1%	242,600	1%
FY14	336,941	9,245	346,186	2%	240,909	9%
*Includes 132KV, 66KV, 33KV, 11KV lines						

# DISCOs | T&D Losses | Trend

												FY18	
KPIs	Description	IESCO	FESCO	GEPCO	LESCO	MEPCO	K-Electric	QESCO	HESCO	TESCO	PESCO	SEPCO	
FY18	T&D Loss	Actual - Unit Lost (GWhs)	1,066	1,527	1,100	3,282	3,153		1,422	1,716	211	5,417	1,716
		Actual Loss (%)	9.14	10.57	10.01	13.83	16.59		22.44	29.88	12.47	38.12	36.68
		Allowed by NEPRA (%)	8.65	10.24	10.03	11.76	15.00		17.50	22.59	12.47	31.95	29.75
		Delta (%)	0.49	0.33	(0.02)	2.07	1.59	-	4.94	7.29	-	6.17	6.93

												FY17	
KPIs	Description	IESCO	FESCO	GEPCO	LESCO	MEPCO	K-Electric	QESCO	HESCO	TESCO	PESCO	SEPCO	
FY17	T&D Loss	Actual - Unit Lost (GWhs)	955	1,359	1,001	2,839	2,698		1,336	1,648	223	4,079	1,701
		Actual Loss (%)	9.03	10.57	10.23	13.77	16.92		23.08	30.63	15.40	32.60	
		Allowed by NEPRA (%)	8.65	10.24	10.03	11.76	15.00		17.50	22.59	20.00	31.95	
		Delta (%)	0.38	0.33	0.20	2.01	1.92	-	5.58	8.04	(4.60)	0.65	-

- GEPCO is the most efficient DISCO having less than allowed T&D losses, followed by FESCO, IESCO & LESCO.
- Lowest T&D loss allowed by the NEPRA to IESCO.
- HESCO, PESCO, SEPCO & QESCO having worst performance on the basis of T&D losses during FY18.

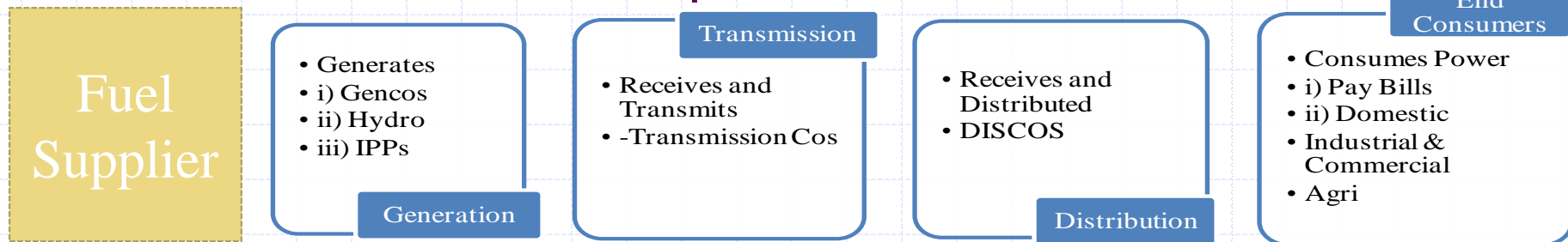
# DISCOs | Recovery | Trend

												FY18	
KPIs	Description	IESCO	FESCO	GEPCO	LESCO	MEPCO	K-Electric	QESCO	HESCO	TESCO	PESCO	SEPCO	
FY18	Recovery	Actual - Units Billed (GW <sub>h</sub> s)	10,606	12,925	9,887	20,449	15,853	13,860	4,916	4,027	1,482	8,796	2,963
		Amount Billed (PKR mln)	144,079	162,538	125,736	282,588	187,209	222,148	71,478	53,612	18,811	111,761	42,203
		Amount Recovered (PKR mln)	129,316	159,168	120,794	271,092	177,061	202,256	17,875	40,427	12,531	99,020	25,205
		Loss (%)	10.25	2.07	3.93	4.07	5.42	8.95	74.99	24.59	33.39	11.40	44.82

												FY17	
KPIs	Description	IESCO	FESCO	GEPCO	LESCO	MEPCO	K-Electric	QESCO	HESCO	TESCO	PESCO	SEPCO	
FY17	Recovery	Actual - Units Billed (GW <sub>h</sub> s)	9,628	11,499	8,778	17,783	13,253	12,981	4,453	3,712	1,227	8,432	2,788
		Amount Billed (PKR mln)	124,084	139,585	105,815	233,501	147,641	211,950	63,948	48,253	14,697	98,439	35,417
		Amount Recovered (PKR mln)	113,996	135,737	101,574	231,638	142,042	190,842	27,849	45,205	12,184	87,901	38,952
		Loss (%)	8.13	2.76	4.01	0.80	3.79	9.96	56.45	6.32	17.10	10.71	(9.98)



# Risk Bubble | Where to find it?



## Circular Debt | Build up over the years

Receivables (PKR bln)						
Entity	Sep-19	Jun-19	Jun-18	Jun-17	Jun-16	Jun-15
PSO	210	220	246	213	180	181
OGDCL	264	243	164	119	111	121
PPL	259	227	143	99	57	59
Attock Petroleum	17	17	20	13	9	9
<b>Total</b>	<b>750</b>	<b>707</b>	<b>573</b>	<b>444</b>	<b>357</b>	<b>370</b>

- ◆ Total amount of circular debt has gone around PKR 1,700bln.
- ◆ During FY 2018-19 it is increased by PKR 465bln, of which PKR 171bln due to DISCOs inefficiencies, PKR 119bln delayed tariff adjustments, PKR 93bln financial costs and PKR 82bln include unbudgeted subsidies.
- ◆ Government has planned to control circular debt gradually and signed an agreement with foreign firm M/s FIELD FISHER which has prepared a structured finance plan to resolve the issue of circular debt.
- ◆ The plan envisaged; i) Govt. will issue new guarantees to transfer the costly CPPA-G payable to IPPs into PHPL, ii) Government will absorb PHPL into its budget, fully recognized the liabilities in PHPL as debt of the Government, iii) reduce the stock of outstanding payables through the use of power assets privatization proceeds, recoveries from the receivables and right sizing of sector-related subsidies.

# Bibliography

1. State of Industry Report 2017-2018 : <http://www.nepra.org.pk/industryreports.htm>
2. National Electric Power Regulatory Authority : <http://www.nepra.org.pk>
3. National Transmission & Dispatch Company : [www.ntdc.com.pk](http://www.ntdc.com.pk)

Note : All year wise Electricity Statistics of Pakistan relate to Fiscal Year (which starts from July 2017 and ends in June 2018)

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