

**GOVERNMENT OF INDIA
MINISTRY OF POWER**

**LOK SABHA
UNSTARRED QUESTION NO.850
TO BE ANSWERED ON 21.11.2019**

AGGREGATE TECHNICAL AND COMMERCIAL LOSSES

**850. SHRI FEROZE VARUN GANDHI:
SHRI KANUMURU RAGHU RAMA KRISHANA RAJU:**

**Will the Minister of POWER
be pleased to state:**

- (a) whether there is increase in the cost of power generation due to loss/wastage of electricity during Transmission and Distribution (T&D) and if so, the details thereof;**
- (b) the extent of Aggregate Technical and Commercial (AT&C) losses of electricity in the country during each of the last five years, Company and State-wise;**
- (c) whether the Government has identified the reasons and if so, the details thereof;**
- (d) the remedial measures being taken to control these losses to strengthen the position of the power companies; and**
- (e) the other measures taken by the Government for encouraging research and development activities for electricity generation, transmission and distribution in the country during the said period?**

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER, NEW & RENEWABLE ENERGY AND THE MINISTER OF STATE FOR SKILL DEVELOPMENT & ENTREPRENEURSHIP

(SHRI R.K. SINGH)

(a) : No Sir, there is no increase in the cost of power generation due to loss/wastage of electricity during Transmission and Distribution (T&D), as Transmission and Distribution are downstream of Generation in the power sector value chain.

(b) : The 5 year details of Aggregate Technical and Commercial (AT&C) losses of electricity in the country, Company and State-wise are enclosed as Annexure.

(c) : There are several reasons for Aggregate and Commercial losses, which include Overloaded Lines/Transformers etc., use of equipment like lines/transformers having high technical losses by design, Low Power Factor, Low HT/LT Ratio, lengthy lines, faulty Meters(Slow/Not working), power theft, billing inefficiencies, collection Issues like inadequate modes/ inconvenient collection timings etc.

(d) : The responsibility for reduction of AT&C losses in the Distribution network rests with the State Power Departments/Utilities. However, Government of India has launched various schemes such as Integrated Power Development Scheme (IPDS), Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY), National Electricity Fund(NEF) and Ujwal Discom Assurance Yojana (UDAY) to enable States to improve their Distribution infrastructure systems so that energy loss including those due to pilferage are reduced. Under IPDS/DDUGJY schemes, central funding is being provided for strengthening of sub-transmission and distribution networks in the urban & rural areas and metering of distribution transformers/feeders/ consumers for reduction of AT&C losses. Funds have also been sanctioned under IPDS for Under Ground (UG) cabling and Aerial Bunched (AB) cables, Smart Metering & IT enablement of Distribution Infrastructure for improvements in billing & collection as well as for reduction of pilferage.

(e) : The Government and various Public Sector undertakings have taken several measures to encourage research and development in the Power Sector; which include NTPC Ltd. assigning 1% of its Profit after Tax(PAT) for R&D, POWERGRID Ltd. (PGCIL) successfully establishing a 1200 kV UHVAC National Test Station at Bina and commissioning 1200kV single and double circuit transmission line sections along with associated 1200 kV bays as a pilot project; and, development of POWERGRID Advanced Research & Technology Centre (PARTec). On the Distribution Sector front, POWERGRID has developed Smart Grid Knowledge Center which aims to bring awareness on the applications of Smart Grid technologies and its demonstration. The Central Power and Research Institute (CPRI) promotes applied research leading to technology development in the power sector through R&D under National Perspective Plan(NPP); Research Scheme on Power (RSoP); and, In-House R&D (IHRD).

ANNEXURE REFERRED TO IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 850 TO BE ANSWERED IN THE LOK SABHA ON 21.11.2019.

Details of AT&C losses for distribution utilities

State	Utility	2013-14	2014-15	2015-16	2016-17	2017-18
Andhra Pradesh	APCPDCL	17.54				
	APEPDCL	6.57	7.67	7.10	7.48	11.18
	APNPDCL	20.80				
	APSPDCL	11.77	12.01	12.03	17.02	16.04
Andhra Pradesh Total		14.77	10.55	10.36	13.77	14.26
Arunachal Pradesh	Arunachal PD	68.20	67.83	54.58	53.64	58.36
Arunachal Pradesh Total		68.20	67.83	54.58	53.64	58.36
Assam	APDCL	30.25	25.84	26.02	20.10	17.64
Assam Total		30.25	25.84	26.02	20.10	17.64
Bihar	NBPDCL	41.93	41.76	35.73	37.82	30.38
	SBPDCL	48.70	45.28	47.87	43.94	34.80
Bihar Total		46.33	43.99	43.30	41.57	33.05
Chhattisgarh	CSPDCL	23.17	27.84	26.36	20.99	18.08
Chhattisgarh Total		23.17	27.84	26.36	20.99	18.08
Delhi	BRPL	16.19	10.76	12.60	11.13	10.03
	BYPL	15.51	19.68	16.76	12.99	10.83
	TPDDL	9.75	10.31	8.83	8.62	8.38
Delhi Total		14.09	12.90	12.44	10.79	9.70
Goa	Goa PD	10.72	13.31	19.77	24.33	13.52
Goa Total		10.72	13.31	19.77	24.33	13.52
Gujarat	DGVCL	10.83	10.81	10.48	10.18	6.60
	MGVCL	14.77	11.47	11.81	11.24	11.72
	PGVCL	24.12	25.18	24.71	21.15	19.64
	UGVCL	9.10	10.21	11.53	9.10	9.31
Gujarat Total		15.93	16.06	16.23	14.18	12.96
Haryana	DHBVNL	30.89	30.71	26.44	23.10	19.16
	UHBVNL	38.61	34.83	32.84	30.67	25.38
Haryana Total		34.33	32.52	29.27	26.42	21.78
Himachal Pradesh	HPSEBL	14.82	16.84	9.68	11.48	11.08
Himachal Pradesh Total		14.82	16.84	9.68	11.48	11.08
Jammu & Kashmir	JKPDD	57.02	61.27	58.75	59.97	53.67
Jammu & Kashmir Total		57.02	61.27	58.75	59.97	53.67
Jharkhand	JSEB	26.30				
	JBVNL		47.85	33.34	35.95	32.48
Jharkhand Total		26.30	47.85	33.34	35.95	32.48
Karnataka	BESCOM	18.93	17.59	13.88	14.91	13.17
	CHESCOM	17.67	21.64	13.60	19.27	13.20
	GESCOM	30.45	21.25	18.00	17.86	16.39
	HESCOM	20.42	19.49	27.63	18.29	22.84
	MESCOM	14.83	15.72	12.71	19.44	14.23
Karnataka Total		20.25	18.71	17.13	16.82	15.61
Kerala	KSEB	11.45				
	KSEBL	22.99	17.64	15.81	16.37	15.89
Kerala Total		16.48	17.64	15.81	16.37	15.89
Madhya Pradesh	MPMaKVVCL	29.60	32.47	31.09	34.04	38.37
	MPPaKVVCL	21.15	32.38	25.06	17.87	17.52
	MPPoKVVCL	34.83	27.09	26.10	26.18	33.95
Madhya Pradesh Total		28.03	30.88	27.37	25.72	29.61
Maharashtra	MSEDCL	14.39	19.25	21.74	22.73	18.97
Maharashtra Total		14.39	19.25	21.74	22.73	18.97

Manipur	Manipur PD	43.55				
	MSPDCL		48.30	31.72	34.00	23.39
Manipur Total		43.55	48.30	31.72	34.00	23.39
Meghalaya	MePDCL	39.77	40.00	45.98	38.81	39.77
Meghalaya Total		39.77	40.00	45.98	38.81	39.77
Mizoram	Mizoram PD	32.53	33.51	35.18	24.98	22.44
Mizoram Total		32.53	33.51	35.18	24.98	22.44
Nagaland	Nagaland PD	38.37	78.48	33.44	38.50	41.36
Nagaland Total		38.37	78.48	33.44	38.50	41.36
Odisha	NESCO	36.47	38.36			
	SESCO	41.18	42.57			
	WESCO	41.24	41.03			
	CESU	38.48	34.31	36.51	36.73	35.49
	NESCO Utility			36.32	25.88	22.56
	SOUTHCO Utility			44.57	42.23	38.73
	WESCO Utility			40.07	41.07	31.13
Odisha Total		39.19	38.30	38.60	36.33	31.80
Puducherry	Puducherry PD	20.93	13.34	22.43	21.34	19.77
Puducherry Total		20.93	13.34	22.43	21.34	19.77
Punjab	PSPCL	17.87	17.20	15.88	14.46	17.31
Punjab Total		17.87	17.20	15.88	14.46	17.31
Rajasthan	AVVNL	22.06	28.13	27.66	25.19	23.09
	JdVVNL	25.71	26.99	29.67	26.16	23.47
	JVVNL	31.08	32.00	35.87	29.79	25.18
Rajasthan Total		26.77	29.28	31.59	27.33	24.05
Sikkim	Sikkim PD	71.23	42.37	43.89	46.52	32.48
Sikkim Total		71.23	42.37	43.89	46.52	32.48
Tamil Nadu	TANGEDCO	22.35	24.74	16.83	18.23	18.53
Tamil Nadu Total		22.35	24.74	16.83	18.23	18.53
Telangana	TSNPDCL		16.49	17.41	16.19	25.29
	TSSPDCL		11.91	12.64	14.77	17.66
Telangana Total			13.23	14.01	15.19	19.91
Tripura	TSECL	41.81	36.23	32.68	29.20	31.34
Tripura Total		41.81	36.23	32.68	29.20	31.34
Uttar Pradesh	DVVNL	36.47	61.11	43.93	41.09	39.28
	KESCO	34.29	32.16	28.16	25.10	22.53
	MVVNL	14.43	51.67	44.58	47.27	45.43
	PaVVNL	23.49	29.85	27.65	30.08	26.20
	PuVVNL	20.09	54.03	53.00	54.79	49.17
Uttar Pradesh Total		24.67	46.32	40.55	41.50	38.29
Uttarakhand	UPCL	19.01	18.82	18.01	16.68	15.79
Uttarakhand Total		19.01	18.82	18.01	16.68	15.79
West Bengal	WBSEDCL	32.05	35.35	28.08	27.92	26.74
West Bengal Total		32.05	35.35	28.08	27.92	26.74
Grand Total		22.62	25.72	23.96	23.56	22.31
