

**GOVERNMENT OF INDIA
POWER
LOK SABHA**

STARRED QUESTION NO:164
ANSWERED ON:02.08.2001
T AND D LOSSES BY SEBS
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Will the Minister of POWER be pleased to state:

- (a) the transmission and distribution losses suffered by State Electricity Boards during 2000-2001;
- (b) whether these losses are more than double as compared to the developed countries;
- (c) if so, the details thereof;
- (d) whether the Union Government have directed all the State Governments to initiate action for improving distribution losses in the power sector;
- (e) if so, the details of reports sent by the State Governments in this regard to the Union Government; and
- (f) the steps being taken to reduce such losses?

Answer

THE MINISTER OF POWER (SHRI SURESH P. PRABHU)

(a) to (f) : A Statement is laid on the Table of the House.

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (f) OF STARRED QUESTION NO.64 TO BE ANSWERED IN THE LOK SABHA ON 02.08.2001 REGARDING T AND D LOSSES BY SEBS

(a) : As per the information made available by SEBs/Eds/Utilities to CEA, a statement indicating the T&D losses from the year 1992-93 to 1998-99 in various SEBs/Eds is given at Annexure-I.

The estimated T&D losses for various SEBs/Eds for the year 1999-2000 and 2000-2001 as per the Annual Report on the working of SEBs & Eds brought out by Planning Commission (June, 2001), are indicated in Annexure-II.

(b) & (c) : In the developed countries these losses range between 6-12%. The losses for the country as a whole as compared to the losses of developed countries are given at Annexure-III.

(d) to (f) : All the State Governments have been directed to initiate action for reducing distribution losses in the power sector. Funds are being provided to the power utilities under the Accelerated Power Development Programme (APDP) for improving distribution system and reduction of T&D losses. An amount of Rs.1000 crores for R&M of thermal and hydro power stations and improvement of distribution systems was provided in the year 2000-2001. Rs.1500 crores is to be allocated to the utilities during the year 2001-2002.

The steps being taken to reduce such losses are as under :

The responsibility for the distribution of power rests with the State Governments/Electricity Boards. In order to reduce the T&D losses Central Electricity Authority had issued Guidelines which inter-alia provide for the following :-

- ? Upgradation of Operating voltages
- ? Reduction of length of LT lines
- ? Location of Transformers near load centres
- ? Adoption of low capacity transformers near consumer premises.
- ? Installation of shunt capacitors.
- ? Improvement in construction and operation techniques and
- ? Systematic and methodical approach for planning and design of distribution system on long-term basis.

Central Electricity Authority had also issued guidelines for conducting Energy Audit. These Guidelines lay down the procedure for

conducting Energy Audit studies for identification of losses and reduction of the same.

The Indian Electricity Act 1910 has been amended to make theft of energy and its abetment of cognizable offence with deterrent punishment upto 3 years imprisonment.

In the Chief Ministers/Power Ministers` Conference held on 3.3.2001, it was resolved that State Governments/State Power Utilities would take the following steps to reduce technical and commercial losses :

- (i) Energy audit at all 11 KV feeders will be made effective within the next 6 months and accountability fixed at the local level.
- (ii) An effective Management Information System for this purpose, will be made operational.
- (iii) On the basis of the above, an effective program will be launched for identifying and eliminating power thefts in the next 2 years.
- (iv) Full metering of all consumers will be completed by December 2001. Special efforts would be made to complete the programme.
- (v) The quality of power supplied especially in rural areas will be improved through the APDP.
- (vi) Commercial viability has to be achieved in distribution in 2-3 years through any or all of the following:

- Creating Profit centres with full accountability,
- Handing over of local distribution to Panchayats/Local Bodies/Franchisees/Users Associations, wherever necessary,
- Privatisation of distribution,
- Or any other means.

(vii) Efforts by States, at inviting private investment in the power sector need to be focused towards the distribution sector.

(viii) Current operations in distribution would need to reach break even in two years and achieve positive returns thereafter.

In the MoU executed between Ministry of Power and State Governments, reduction of T&D losses, metering and energy audit have been included and performance milestones indicated.

Annex.I

ANNEXURE REFERRED TO IN PART (a) OF THE STATEMENT LAID IN REPLY TO STARRED QUESTION NO.164 TO B ANSWERED IN THE LOK SABHA ON 2.8.2001 REGARDING T AND D LOSSES BY SEBs.

Percentage Transformation, Transmission & Distribution losses (including commercial losses such as pilferage etc.) in SEBs/EDs

REGION/SEB/ED

1992-
93
1993
-94
1994-
95
1995-96
1996-97
1997-98

1998-
99
Northern Region:

Haryana
26.78
25.00
30.80
32.39
32.77
34.04
33.81
Himachal Pradesh
19.51
18.31
18.21
16.09
18.02
20.13
20.13
Jammu & Kashmir
48.28
45.69
48.74
47.52
48.27
49.95
47.07
Punjab
19.24
19.37
16.70
18.49
19.10
18.94
16.83
Rajasthan
22.74
25.00
24.78
29.27
26.28
26.41
29.43
Uttar Pradesh
24.43
24.08
21.69
21.84
24.84
26.18
26.86
Chandigarh
26.21
27.27
28.44
33.72
21.88
22.38
NA
DVB (Delhi)
23.56
31.79
34.56
48.57
49.08
47.91
40.0
Western Region:

Gujarat

22.03
20.34
20.02
20.08
17.14
21.57
19.69
Madhya Pradesh
21.35
20.26
19.61
17.84
19.24
19.58
20.92
Maharashtra
17.83
16.22
16.33
16.95
16.55
18.75
18.14
D&N Haveli
17.98
12.64
11.35
09.31
08.80
12.90
NA
Goa
21.85
24.50
26.87
26.06
23.50
31.02
NA
Daman & Diu
15.67
22.34
16.30
12.80
08.15
14.69
NA
Southern Region:

Andhra Pradesh
19.88
19.91
17.95
19.34
33.19
32.14
31.8
Karnataka
19.55
19.55
19.41
19.06
18.73
19.31
30.08
Kerala
21.95
20.00
20.05
21.12
20.59

18.73
17.75
Tamil Nadu
17.50
17.18
17.11
16.19
17.65
17.29
16.9
Lakshadweep
18.72
16.99
17.84
17.23
15.11
15.70
NA
Pondicherry
15.31
15.80
15.00
16.54
17.38
13.56
NA
Eastern Region:

Bihar
22.00
20.35
19.76
15.91
25.31
16.26
23.0
Orissa (GRIDCO)
25.25
22.43
23.03
24.17
50.15
50.10
48.44
Sikkim
22.55
22.60
21.22
16.47
29.24
22.87

West Bengal
24.87
20.82
21.51
19.26
18.01
19.67
25.5
A&N Island
23.62
23.71
22.38
19.25
19.15
20.59
NA
North Eastern Region:

Assam
21.41
22.44
24.18
26.91
25.97
27.32
23.0
Manipur
22.35
23.92
25.30
24.85
22.95
21.09
NA
Meghalaya
11.79
18.03
18.47
12.55
19.75
12.28
20.17
Nagaland
27.26
33.45
36.12
35.17
26.81
29.79
NA
Tripura
30.64
30.53
31.96
30.86
30.11
31.11
NA
Arunachal Pradesh
32.32
42.04
45.30
37.12
32.62
34.10
NA
Mizoram
29.04
31.89
29.76
25.18
34.35
46.84
NA
All India (Utilities)
21.80
21.41
21.13
22.27
24.53
24.79
25.62

As reported by SEBs/ Electricity Deptt. and subject to change after reconciliation of inter-state sale of energy and are provisional.

ANNEXURE II

ANNEXURE REFERRED TO IN PART (a) OF THE STATEMENT LAID IN
REPLY TO STARRED QUESTION NO.164 TO BE ANSWERED IN THE LOK
SABHA ON 2.8.2001 REGARDING T AND D LOSSES BY SEBs.

T&D Losses as percentage of Availability

SEBs/ EDs
1999-2000
2000-2001

Haryana	27.0
	25.0
Himachal Pradesh	17.6
	17.3
Jammu & Kashmir	47.0
	46.5
Punjab	16.8
	16.9
Rajasthan	29.5
	22.0
Uttar Pradesh	25.5
	25.0
Delhi	47.0
	45.0
Gujarat	19.6
	19.4
Madhya Pradesh	20.7
	20.5
Maharashtra	17.0
	16.7
Goa	24.3
	24.0
Andhra Pradesh	31.4
	31.0
Karnataka	30.0
	30.0
Kerala	21.1
	20.8
Tamil Nadu	16.7
	16.5
Pondicherry	13.3
	13.0
Bihar	23.0
	22.0
Orissa (GRIDCO)	6.0
	6.0
Sikkim	20.0
	20.0
West Bengal	28.0

28.0
Assam
37.0
35.0
Manipur
40.0
30.0
Meghalaya
20.4
20.3
Nagaland
28.5
29.2
Tripura
28.0
28.0
Arunachal Pradesh
20.5
18.0
Mizoram
42.5
40.0

Note :The losses in Distribution Companies in Orissa are not included in the estimates.

Annexure-III

ANNEXURE REFERRED TO IN PARTS (b) & (c) OF THE STATEMENT LAID IN REPLY TO STARRED QUESTION NO.164 TO BE ANSWERED IN THE LOK SABHA ON 2.8.2001 REGARDING T AND D LOSSES BY SEBs.

PERCENTAGE TRANSMISSION AND DISTRIBUTION LOSSES IN DEVELOPED COUNTRIES

Country
1989
1990
1991
1992
1993
Austria

719

734

744

715

759
Belgium

5.64

5.82

5.59

5.51

5.60
Canada

9.45

8.44

8.74

8.46

8.25
Czechoslovakia

791

786

-

8.50
10.34
Denmark

5.65

5.20
6.92
6.70
6.93
Finland

5.64

5.10

5.04

5.48

5.01
France

8.25

8.19

8.28

764

8.02
Germany
-

5.45

5.17

4.87

5.08
Greece

8.12

9.05

8.88

792

8.66
Hungary
11.11
11.09
11.06

9.43
13.66
Iceland

8.58

8.88

8.74

765
6.72
Ireland

9.70

9.78
10.00

9.71

9.61
Israel

5.06

5.22

5.43

5.06

4.65
Italy

8.54

783

8.15

784

8.31
Netherland

4.53

4.58

4.52

4.59

4.94
Norway

8.53

749

740

751

8.13
Poland
10.58

9.15
12.43
13.85
15.19
Portugal
12.31
12.31
12.27
12.32
12.46
Romania
6.16

8.96
10.16
10.85
11.25
Spain

9.10

9.85
10.01
10.05
10.10
Sweden

720
6.98
6.57

725

772
Switzerland

8.03

797

797

8.03

798

U S S R

9.45

9.32

-

-

-

Russian Fed

-

8.84

8.98

9.53

9.26

Ukraine

-

9.03

9.53

10.21

10.85

Ukraineian SSR

8.50

-

-

-

-

U.K.

8.53

8.39

8.80

749

785

U.S.A.

5.70

9.93

793

8.40

8.66

Uzbekistan

-
10.40

9.43
10.09

9.72
Yugoslavia

9.89
-
10.25

-
-
India@
23.28
22.89
22.83
21.80
21.41

Note/Source

1. From Annual Bulletin of Electric Energy Statistics for Europe, U.N. publication

2. General Review published by Central Electricity Authority

3. NA - Data not available/Not applicable

4. @ For Financial Years