

rity after completion of techno-economic appraisal. The investment decision by the Planning Commission on these projects has not yet been taken. The remaining projects are in various stages of techno-economic appraisal and have not been cleared due to various reasons such as technical clarifications being awaited from the project authorities, inter-State aspects remaining to be resolved and availability of coal and its transportation arrangements, remaining to be confirmed.]

Percentage of Loss of Electric power from generation source to consumer point

1230. DR. (SHRIMATI) NAJMA .
HEPTULLA: SHRI NAND
KISHORE BHATT:

Will the Minister of ENERGY AND COAL be pleased to state:

- (a) what is the average percentage of loss of electric power from generation source to consumer point in various States;
- (b) what is the percentage of such loss in various developed countries;
- (c) whether any attempt has been made to import advanced technology in this field to save valuable power; 1 and
- (d) if so, what are the details of the measures taken in this regard?

THE MINISTER OF STATE IN THE MINISTRY OF ENERGY (SHRI VIKRAM MAHAJAN): (a) The percentage of loss of electric power from generation source to consumer point, for the year 1977-78, in various States may kindly be seen in the Statement (I) enclosed.

(b) Available information regarding the prevalent transmission and distribution losses in a few advanced countries may kindly be seen in the Statement (II) enclosed.

(c) The requisite technology for reducing these losses is available in the country.

(d) The State Electricity Boards are taking up system improvement schemes within the prevailing constraint of the resources. However, following guide-lines have been issued by the Central Electricity Authority to the State Electricity Boards;

(i) Formation of a special setup in each Electricity Board to identify the weak areas.

(ii) Electricity Boards to initiate pilot system studies for distribution planning and make endeavour to cover not only the primary distribution and L.T. net works, but also the associated sub-transmission and transmission systems.

(iii) Setting up of special units in the Electricity Boards to prepare scheme for reduction of losses.

(iv) Amendment of conditions of 'supply' to make it obligatory on the part of the inductive motive power consumers to install shunt capacitors at their terminals.

(v) Erection of new transmission lines and sub-stations to relieve over-loaded lines. Changing of conductors by higher size. Of the existing lines, relocation of substations and re-arrangement of existing L.T. systems.

(vi) Installation of high tension (HT) capacitors at various (a) Grid and (b) primary distribution sub-stations, for improving voltage conditions, power factor and to reduce loading of the transmission and sub-transmission lines.

(vii) Setting up of vigilance squads comprising Electricity Boards/Departments' engineers and a police inspector, to conduct surprise inspections to check pilferage of energy.

Statement-I
Year-1977-78

Name of the Region/State	Losses(%)
<i>Northern Region</i>	
1. Haryana	21.76
2. Himachal Pradesh	22.39
3. Jammu and Kashmir	33.68
4. Punjab	16.64
5. Rajasthan	25.00
6. Uttar Pradesh	20.22
7. Chandigarh	29.85
8. Delhi	15.62
<i>Western Region</i>	
1. Gujarat	17.49
2. Madhya Pradesh	18.91
3. Maharashtra	16.91
4. Goa, Daman and Diu	22.36
5. Dadra and Nagar Haveli	37.14
<i>Eastern Region</i>	
1. Bihar	18.02
2. Orissa	14.40

Name of the Region/State	Losses (%)
3. West Bengal	12.74
4. A & N Islands	20.88
5. Sikkim	25.59
<i>Southern Region</i>	
1. Andhra Pradesh	23.82
2. Karnataka	16.90
3. Kerala	12.04
4. Tamil Nadu	18.29
5. Pondicherry	15.68
6. Lakshadweep	17.81
<i>North-Eastern Region</i>	
1. Assam	19.96
2. Manipur	52.50
3. Meghalaya	8.28
4. Nagaland	38.20
5. Tripura	25.85
6. Arunachal Pradesh	32.62
7. Mizoram	10.31
TOTAL (ALL-INDIA)	19.26

Statement-II

*Transmission and Distribution Losses**

Country	Percentage T & D Losses				
	1970	1973	1974	1975	1976
1. Austria	8.73	8.04	7.62	7.97	7.41
2. Belgium	5.55	4.99	5.03	5.75	5.59
3. Canada	8.81	8.99	9.35	10.47	9.22
4. Czechoslovakia	7.74	8.05	8.00	7.67	7.74
5. France	7.07	6.71	6.58	6.91	6.86
6. Germany-East	7.78	7.25	7.24	7.25	7.10
7. Germany-West	5.96	5.04	4.82	5.07	N.A.
8. Hungary	9.16	9.28	8.94	8.59	8.26
9. Italy	8.41	8.45	7.86	8.79	8.66
10. Poland	8.92	9.19	9.29	9.56	9.76
11. Portugal	12.18	12.76	12.60	10.79	N.A.
12. Spain	13.11	12.12	10.67	10.43	10.26
13. Turkey	10.95	11.77	10.61	10.59	10.00
14. U.K.	7.63	7.45	7.16	7.66	7.26
15. U.S.A.	7.87	N.A.	8.44	8.77	8.80
16. U.S.S.R.	7.93	8.02	8.01	8.00	8.25

*Exclude the losses in step-up transformer in generating stations.

NOTE: Fig res for India have been computed assuming 0.6% losses in set-up transformation.