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STANDING COMMITTEE ON ENERGY

(2024-25)

EIGHTEENTH LOK SABHA

MINISTRY OF POWER

DEMANDS FOR GRANTS
(2025-26)

FOURTH REPORT

सत्यमेव जयते

LOK SABHA SECRETARIAT
NEW DELHI

March, 2025/ Phalguna, 1946 (Saka)

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STANDING COMMITTEE ON ENERGY
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Presented to Lok Sabha on 12th March, 2025

Laid in Rajya Sabha on 12th March, 2025

LOK SABHA SECRETARIAT
NEW DELHI

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2.	Shri Kulmohan Singh Arora	Director
3.	Shri Ajitesh Singh	Deputy Secretary
4.	Ms. Deepika	Under Secretary

INTRODUCTION

I, the Chairperson, Standing Committee on Energy having been authorized by the Committee to present the Report on their behalf, present this Fourth Report of the Committee on 'Demands for Grants (2025-26) of the Ministry of Power'.

2. The Committee took oral evidence of representatives of the Ministry of Power on 24th February, 2025. The Committee wish to express their thanks to the representatives of the Ministry and concerned Organizations for appearing before the Committee for evidence and furnishing the information desired by the Committee in connection with the issues relating to the subject.

3. The Report was considered and adopted by the Committee at their sitting held on 11th March, 2025.

4. The Committee place on record their appreciation of the assistance rendered to them by the officials of the Lok Sabha Secretariat attached to the Committee.

5. For facility of reference and convenience, the observations and recommendations of the Committee have been printed in bold letters in Part-II of the Report.

New Delhi
11th March, 2025
20 Phalguna, 1946 (Saka)

Shrirang Appa Barne
Chairperson,
Standing Committee on Energy

LIST OF ABBREVIATIONS	
ACS	Average Cost of Supply
ADEETIE	Assistance in Deploying Energy Efficient Technologies in Industries & Establishment
AMISP	Advanced Metering Infrastructure Service Provider
ARR	Average Revenue Realized
AT&C	Aggregated Transmission and Commercial
AUSC	Advanced Ultra Supercritical
BE	Budgetary Estimate
BEE	Bureau of Energy Efficiency
BESPA	Battery Energy Storage Purchase Agreement
BESS	Battery Energy Storage System
BHEL	Bharat Heavy Electricals Limited
CAG	Comptroller and Auditor General
CAPEX	Capital Expenditure
CCUS	Carbon Capture, Utilization and Storage
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CFA	Central Financial Assistance
ckt. Kms.	Circuit Kilometers
CoD	Commercial Operations Date
CPRI	Central Power Research Institute
CPSEs	Central Public Sector Enterprises
CPSUs	Central Public Sector Undertakings
CPWD	Central Public Works Department
CRGO	Cold Rolled Grain Oriented
CSS	Centrally Sponsored Scheme
CTU	Central Transmission Utility
CVPPPL	Chenab Valley Power Project Private Limited
DAJGUA	Dharti Aaba Janjatiya Gram Utkarsh Abhiyan
DDUGJY	Deendayal Upadhyaya Gram Jyoti Yojana
DISCOM	Distribution Company
DPR	Detailed Project Report
DSM	Demand Side Management
DTE	Domestic Travel Expenses
DVC	Damodar Valley Corporation
EAP	Externally Aided Project
EBR	Extra Budgetary Resources
ECSBC	Energy Conservation and Sustainable Building code
EFC	Expenditure Finance Committee
EPC	Engineering, Procurement and Construction
FGD	Flue-gas Desulfurization
FTE	Foreign Travel Expenses
FY	Financial Year

GBS	Gross Budgetary Support
GCIL	Grid Controller of India Limited
GEF	Global Environment Facility
GIB	Great Indian Bustard
GoI	Government of India
GSDP	Gross State Domestic Product
GW	Gigawatt
GWh	Gigawatt Hours
HEP	Hydro Electric Project
HH	Households
HRT	Head Race Tunnel
HVDC	High Voltage Direct Current
IEBR	Internal and Extra Budgetary Resources
INDC	Intended Nationally Determined Contributions
IoT	Internet of Things
IPDS	Integrated Power Development Scheme
JBVNL	Jharkhand Bijli Vitran Nigam Limited
JV	Joint Venture
KGBV	Kasturba Gandhi Balika Vidyalaya
kV	Kilo Volt
LoA	Letter of Award
L&T	Larsen & Toubro
MNRE	Ministry of New and Renewable Energy
MoF	Ministry of Finance
MoP	Ministry of Power
MSEDCL	Maharashtra State Electricity Distribution Company Limited
MSME	Micro, Small and Medium Enterprises
MU	Million Unit
MVA	Megavolt Amperes
MW	Mega Watt
MWh	Megawatt Hour
NDMC	New Delhi Municipal Council
NEEPCO	North Eastern Electric Power Corporation Limited
NER	North Eastern Region
NERPSIP	North Eastern Region Power System Improvement Project
NHPC	National Hydro Power Corporation Limited
NLDC	National Load Despatch Centre
NMEEE	National Mission for Enhanced Energy Efficiency
NPTI	National Power Training Institute
NSGM	National Smart Grid Mission
NTPC	National Thermal Power Corporation Limited
NVVN	NTPC Vidyut Vyapar Nigam Limited
PFC	Power Finance Corporation

PGCIL	Power Grid Corporation of India Limited
PGVCL	Paschim Gujarat Vij Company Limited
PM-JANMAN	Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan
PMDP	Prime Minister Development Package
PMRP	Prime Minister's Reconstruction Plan
PSDF	Power System Development Fund
PSP	Pumped Storage Project
PVTG	Particularly Vulnerable Tribal Groups
R-APDRP	Restructured Accelerated Power Development and Reforms Programme
R&D	Research and Development
RDSS	Revamped Distribution Sector Scheme
RE	Revised Estimated
REC	Rural Electrification Corporation
REMC	Renewable Energy Management Centers
RGGVY	Rajiv Gandhi Grameen Vidyutikaran Yojana
RLDC	Regional Load Despatch Centre
RoW	Right of Way
SAUBHAGYA	Pradhan Mantri Sahaj Bijli Har Ghar Yojana
SC	Scheduled Caste
SCADA	Supervisory Control and Data Acquisition
SCSP	Scheduled Caste Sub-Plan
SDA	State Designated Agency
SECF	State Energy Conservation Fund
SECI	Solar Energy Corporation of India
SEEAP	State Energy Efficiency Action Plans
SJVN	Satluj Jal Vidyut Nigam Limited
SMEs	Small and Medium Enterprises
SSC	Staff Selection Commission
ST	Scheduled Tribes
TASP	Tribal Area Sub-Plan
TCED	Thrissur Corporation Electricity Department
T&D	Transmission and Distribution
THDC	Tehri Hydro Development Corporation
TSA	Treasury Single Account
Twh	Terawatt Hours
UGVCL	Uttar Gujarat Vij Company Limited
ULB	Urban Local Bodies
UNDP	United Nations Development Programme
UTs	Union Territories
VGF	Viability Gap Funding
VVP	Vibrant Village Programme

PART-I
NARRATION ANALYSIS

CHAPTER – I
INTRODUCTORY

1.1 Electricity is a concurrent subject at Entry 38 in List III of the Seventh Schedule of the Constitution of India. As per the Government of India (Allocation of Business) Rules, 1961; the main items of work dealt with by the Ministry of Power, are given below:

i) General Policy in the electric power sector and issues relating to energy policy and coordination thereof. (Details of short, medium and long-term policies in terms of formulation, acceptance, implementation and review of such policies, cutting across sectors, fuels, regions and intra-country and inter-country flows);

ii) All matters relating to hydro-electric power (except small/mini/micro hydel projects of and below 25 MW capacity), thermal power and transmission and distribution system network;

iii) Research, development and technical assistance relating to hydro-electric and thermal power, transmission system network and distribution systems in the States/UTs;

iv) Administration of the Electricity Act, 2003 (36 of 2003), the Energy Conservation Act, 2001 (52 of 2001), the Damodar Valley Corporation Act, 1948 (14 of 1948) and the Bhakra Beas Management Board as provided in the Punjab Reorganization Act, 1966 (31 of 1966);

v) All matters relating to Central Electricity Authority, Central Electricity Board and Central Electricity Regulatory Commission;

vi) (a) Rural Electrification;
(b) Power schemes and issues relating to power supply/development schemes/programmes/decentralized and distributed generation in the States and Union Territories;

vii) Matters relating to the following Undertakings/Organizations:
(a) The Damodar Valley Corporation;
(b) The Bhakra Beas Management Board (except matters relating to irrigation);
(c) National Thermal Power Corporation Limited;
(d) National Hydro-electric Power Corporation Limited;
(e) Rural Electrification Corporation Limited;
(f) North Eastern Electric Power Corporation Limited;
(g) Power Grid Corporation of India Limited;
(h) Power Finance Corporation Limited;
(i) Tehri Hydro Development Corporation (THDC India Limited);

(j) Nathpa Jhakri Power Corporation (SJVN Limited);
(k) Central Power Research Institute;
(l) National Power Training Institute;
(m) Bureau of Energy Efficiency;
(n) Power Trading Corporation of India Limited;
(o) Narmada Hydro Development Corporation (Joint Venture).

viii) All matters concerning energy conservation and energy efficiency pertaining to Power Sector.

1.2 All India installed generation capacity as on 31.12.2024, as furnished by the Ministry is given below:

(in MW)

Sector	Mode wise breakup									Grand Total
	Thermal					Nuclear	Renewable			
	Coal	Lignite	Gas	Diesel	Total		Hydro	RES	Total	
State	70637.50	1150.00	7012.06	280.31	79079.87	0.00	27294.45	2632.42	29926.87	109006.74
Private	73032.00	1830.00	10568.24	308.89	85739.13	0.00	3931.00	158211.86	162142.86	247881.99
Central	68680.00	3640.00	7237.91	0.00	79557.91	8180.00	15742.72	1632.30	17375.02	105112.93
Total	212349.50	6620.00	24818.21	589.20	244376.91	8180.00	46968.17	162476.58	209444.75	462001.66

1.3 As per information provided by the Ministry, as on 31st December, 2024; Transmission System (of 220 kV & above voltage level) consists of 4,91,504 ckm of Transmission Lines, 12,97,405 MVA of Transformation Capacity and the whole Country has now been connected into one grid running on one frequency with the Inter-Regional capability of transferring 1,18,740 MW from one corner of the Country to another, making it one of the largest unified grids in the World.

CHAPTER – II
ANALYSIS OF DEMANDS FOR GRANTS (2025-26) OF THE MINISTRY OF POWER

2.1 The Demands for Grants of the Ministry of Power (Demand No. 79) was laid in the Lok Sabha on 7th February, 2025. The provisions made in the Revenue and the Capital Heads of the demand are as under:

(in Rs. Crore)

	Revenue	Capital	Total
Charged	---	---	---
Voted	21188.59	658.41	21847

2.2 The details of funds demanded by the Ministry of Power *vis-à-vis* the funds allocated by the Ministry of Finance, as furnished by the Ministry, are given below:

S. No.	Name of the Scheme	BE (2025-26) proposed by MoP *(in Rs. Crore)*	BE (2025-26) granted by MoF *(in Rs. Crore)*
1	Energy Conservation	44.35	44.35
2	Reform Linked Distribution Scheme	29600.00	16021.00
3	Green Energy Corridor	1.00	0.01
4	Interest Subsidy to National Electricity Fund	250.00	250.00
5	Power System Improvement in North Eastern States excluding Arunachal Pradesh and Sikkim	650.00	600.00
6	Strengthening of Transmission System in the States of Arunachal Pradesh and Sikkim	0.01	0.01
7	Power System Development Fund (PSDF)	1165.10	1100.08
8	Additional Fund requirement for PMRP (J&K)	0.01	0.00
9	Viability Gap Funding	477.00	200.00
10	ADEETTIE	-	72.00
11	Payment pertaining to International Arbitration Case	12.00	5.00
12	Advance Ultra Super Critical Plant	0.01	0.01
13	Support for Flood moderation storage Hydro Electric Projects	300.00	299.20
14	Support for Cost of Enabling Infrastructure i.e. roads/ bridges	50.00	50.00
15	Reimbursement of Claim for any expenditure already incurred by NTPC on Lohari Nagpala Hydro Power Project	80.40	80.12
16	Central Assistance for Pakul Dul HEP under J&K PMDP 2015 as grant and loan to CVPPPL	303.60	300.00
17	GoI fully service bond – issue expenditure and interest (PFC Bonds)	376.40	376.40
18	GoI fully service bond – issue expenditure and interest (REC Bonds)	1944.58	1943.59

19	Central Power Research Institute, Bengaluru	86.23	80.00
20	National Power Training Institute (NPTI)	71.40	50.00
21	Scheme for Promoting Energy Efficiency	50.00	40.00
22	Grant towards cost of downstream protection work of Subansiri Lower Project (NHPC)	0.00	13.00
23	Manufacturing Zones under Atmanirbhar Bharat Package	80.00	20.00
24	Total Establishment Expenditure	335.78	302.22
25	Central Financial Assistance towards equity participation by the State Governments for the development of HEPs in the NER.	0.01	0.01
Grand Total		**35877.88**	**21847.00**

2.3 Out of the total Union Budget (2025-26) of Rs. 50,65,345.04 crore, an amount of Rs. 21,847.00 crore is allocated for the Ministry of Power which is 0.43 % of the total Budget. The details of the budgetary allocation for other important Ministries, as furnished by the Ministry of Power, are given below:

S. No.	Ministry	Budget (2025-26) *(in Rs. Crore)*	% of the total Budget
1	MNRE	26,549.38	0.52
2	Coal	501.20	0.01
3	Ports, Shipping and Waterways	3,470.58	0.07
4	Atomic Energy	24,049.10	0.47
5	MSME	23,168.15	0.46

2.4 The targets regarding Internal & Extra Budgetary Resources (IEBR) for CPSEs of the Ministry of Power for the financial year 2025-26, as furnished by the Ministry, are given below:

(in Rs. Crore)

Sl. No.	Name of CPSEs	IEBR Target for 2025-26
1	NTPC	26000
2	PGCIL	25000
3	NHPC	13000
4	SJVNL	12000
5	THDCIL	3543.65
6	NEEPCO	3394.83
7	DVC	2600
8	GRID INDIA	300
Total		**85838.48**

2.5 Scheduled Capacity Addition during the year 2025-26, as furnished by the Ministry, is given below:

(In MW)

Sector	Thermal	Hydro	Nuclear	Total
Central	3580	2120	2200	7900
State	2920	850	0	3770
Private	0	960	0	960
Total	**6500**	**3930**	**2200**	**12630**

2.6 On being asked whether the allocation made for 2025-26 would be sufficient to meet the requirement of the physical targets under various schemes/ programmes, the Ministry furnished the following:

> "The allocation made for 2025-26 for the Ministry of Power is Rs. 21,847 crore which is lesser than the amount projected by MoP i.e. Rs. 35877.88 crore.
>
> However, if the physical targets require more funds due to unforeseen circumstances, the Ministry may try to mobilize additional funds through the following ways:
>
> **Reallocation of funds within the Ministry**: The Ministry may reallocate funds from other programmes where the physical targets are not upto the desired level to critical programmes, as per requirement.
>
> **RE/Supplementary grants**: The Ministry may request for additional funds at RE/Supplementary grants stage to meet the shortfall in funds."

2.7 When asked about the new initiatives including new schemes/programmes proposed to be started during the financial year 2025-26, the Ministry furnished the following:

> "a) **National Hydro Policy, 2025**: The Ministry is in the process of formulation of National Hydro Policy, 2025. The policy aims to develop and harness the hydro-power potential as well as to provide a conducive environment for the growth of hydro-power, and to overcome with the impediments hampering the growth of hydro-power. The Policy aims to promote hydro-power generation including PSPs. The Policy also proposes to value the attributes of hydro power like peaking power, energy security, water management and water security, grid security and impetus for regional development. It is targeted to improve the viability of the hydro sector and attract investments, harness viable hydroelectric potential at the earliest and promote a technology-balanced environment in power generation.

b) **ADEETIE**: The new scheme rolled out during FY 2025-26 is ADEETIE (Assistance in Deploying Energy Efficient Technologies in Industries & Establishments). ADEETIE is a Central Sector Scheme under the Ministry of Power aimed at promoting energy efficiency in 14 energy-intensive MSME sectors which includes Foundry, Forging, Steel Re-Rolling, Paper, Glass & Refractory, Ceramics, Brass, Chemicals, Pharma, Bricks, Food Processing, Leather, Fisheries and Textile. The scheme provides financial support through interest subvention on loans for energy-efficient technologies and offers handholding assistance for conducting investment-grade energy audits, preparation of detailed project reports for energy efficiency upgrades. Total budgetary support for the scheme is Rs. 925 crore.

c) **Central Financial Assistance (CFA) towards equity participation by the State Governments for the development of Hydro Electric Projects in the North Eastern Region:**

- The Government of India, on 30.08.2024, has approved the scheme for providing Central Financial Assistance (CFA) to the State Governments of NER towards their equity participation for development of Hydro Electric Projects in the North Eastern Region (NER) through Joint Venture (JV) Collaboration between State entities and Central Public Sector Undertakings.
- The Scheme provides for formation of a Joint Venture (JV) Company for projects of a Central PSU with the State Government.
- The grant towards equity portion of the State Government of NER would be capped at 24% of the total project equity subject to a maximum of Rs. 750 crore per project. The cap of Rs. 750 crore would be revisited, if required, on a case-to-case basis. The ratio of equity of the CPSU and the State Government in the JV would be maintained as per the MoU signed, at the time of disbursement of the grant.
- This scheme has an outlay of ₹ 4136 crore to be implemented from FY 2024-25 to FY 2031-32. A cumulative hydro capacity of about 15000 MW would be supported under the scheme. The scheme would be funded through 10% Gross Budgetary Support (GBS) for North Eastern Region from the total outlay of the Ministry of Power.
- CFA would be limited to only viable Hydro Electric Projects. States would be required to waive/stagger free power and/or reimburse SGST to make the project viable, if required.
- MoU to be signed with the State Government shall have an irrevocable provision that States would not impose any levies on the hydro projects subsequent to project commissioning. In case, levies are imposed by the State Government, it would reimburse the enhanced cost as a result of such levies to the project developer so that project remains financially viable.
- The release of funds under CFA will be subject to the condition that the State shall also provide support and cooperation in development of other HEPs in the State.

- Ministry of Power will develop transparent and objective criteria for imposing a penalty of reducing 0.5% free power per year for delay in project construction on account of factors viz., delay in land acquisition. local agitation, road blockade, various clearances pertaining to the State Government and unavailability of construction power etc,. which are attributable to the host state Government.
- With the introduction of this scheme, participation of the State Governments in the hydro development shall be encouraged and risk and responsibilities shall be shared in a more equitable manner. The issues such as land acquisition, rehabilitation & resettlement and local law & order issues would be reduced with State Governments becoming stakeholders. This would avoid time and cost over-run of the projects.
- This scheme shall play a significant role in harnessing the hydro power potential of North East. It would bring huge investment in the North Eastern Region and would provide large number of direct employment to the local people along with indirect employment/entrepreneurial opportunities through transportation, tourism, small-scale business. Development of hydroelectric projects shall also contribute towards realization of India's Nationally Determined Contribution (INDC) of establishing 500 GW renewable energy capacity by 2030 and would help in integration of renewable energy sources in the grid thus enhancing flexibility, security and reliability of the national grid."

CHAPTER – III
ANALYSIS OF PAST PERFORMANCE OF THE MINISTRY

3.1 The details of the demands posted by the Ministry of Power and the funds allocated by the Ministry of Finance, as furnished by the Ministry, are given below:

(in Rs. Crore)

S. No.	Financial Year	BE sought by Ministry of Power	BE sanctioned to Ministry of Power
1	2020-21	17227.22	15874.82
2	2021-22	29658.86	15322.00
3	2022-23	24049.99	16074.74
4	2023-24	25280.89	20671.32
5	2024-25	26091.62	20502.00

3.2 The details regarding Budgetary Estimates (BE), Revised Estimates (RE) and the Actual Expenditure during the last five years, as furnished by the Ministry, are given below:

(in Rs. Crore)

Year	BE	RE	Actual Expenditure	Expenditure (% of RE)
2020-21	15874.82	10835.13	10581.92	97.66
2021-22	15322.00	18416.26	17950.96	97.47
2022-23	16074.74	13106.58	9494.07	72.44
2023-24	20671.32	17635.00	16720.93	94.82
2024-25	20502.00	19845.00	17027.61 *(upto 31.01.2025)*	85.80

3.3 The Scheme-wise details of Budgetary Estimates (BE), Revised Estimates (RE) and the Actual Expenditure, as furnished by the Ministry, are given below:

(in Rs. Crore)

S. No.	Name of the Scheme	BE 2024-25	RE 2024-25	Actual Expenditure *(upto 31.01.2025)*	% BE
A. Central Sector Scheme					
1.	Energy Conservation	25.00	35.00	24.50	98.00
2.	Reform Linked Distribution Scheme	12585.00	12665.00	11960.81	95.04
3.	Power System Development Fund	1200.00	1200.00	969.82	80.82
4.	Strengthening of Transmission Systems in the States of Arunachal Pradesh & Sikkim	1315.01	1214.66	772.00	58.71
5.	Power System Improvement in North Eastern States excluding Arunachal Pradesh & Sikkim (NERPSIP)	600.01	400.00	200.00	33.33

6.	Energy Efficiency Financing Facility-ADEETIE	--	--	--	0.00
7.	Green Energy Corridor	1.00	0.01	0.00	0.00
8.	Interest subsidy to National Electricity Fund	500.00	200.00	6.32	1.26
9.	Scheme for promoting Energy Efficiency activities in different sectors of Indian Economy	40.00	37.00	25.84	64.60
10.	Viability Gap Funding for development of Battery Energy Storage Systems	96.00	46.00	0.00	0.00
Total (A)		**16362.02**	**15797.67**	**13959.29**	**85.32**
B. Other than Central Sector Expenditure					
11.	Central Power Research Institute (CPRI)	180.00	140.00	110.18	61.21
12.	National Power Training Institute (NPTI)	50.00	25.00	23.61	47.22
13.	Central Assistance for Pakal Dul HEP under J&K PMDP 2015 as grant and loan to Chenab Valley Power Projects Private Limited (CVPPPL)	568.68	568.68	568.68	100.00
14.	Interest Payment and issuing expenses on the Bond (PFC Bonds)	376.40	376.40	243.56	64.71
15.	Interest Payment and issuing expenses on the Bond (REC Bonds)	1943.59	1943.59	1284.72	66.10
16.	Lohari Nagpala - Reimbursement to NTPC	80.40	52.12	51.60	64.18
17.	Payment pertaining to International Arbitration Case	12.01	3.00	0.12	1.00
18.	Support for equity participation-Hydro Electric Projects in NER	--	--	--	0.00
19.	Grant towards cost of Down Stream protection work of Subansiri Lower Project (NHPC)	51.98	40.00	29.67	57.08
20.	Manufacturing zones under Atma Nirbhar Bharat Package	80.00	80.00	80.00	100.00
21.	Advance Ultra Super Critical Plants	0.00	0.01	0.00	0.00
22.	Support for flood moderation storage-Hydro Electric Projects	449.25	493.06	437.86	97.46
23.	Support for cost of enabling infrastructure i.e. roads/bridge	60.00	50.00	19.14	31.90
24.	Additional fund requirement to PMRP	0.01	0.00	0.00	0.00
25.	Establishment	287.66	275.47	219.18	76.19
Total (B)		**4139.98**	**4047.33**	**3068.32**	**74.11**
Grand Total (A+B)		**20502.00**	**19845.00**	**17027.61**	**83.05**

3.4 The details of CAPEX achievements vis-à-vis targets of CPSEs of the Ministry of Power, as furnished by the Ministry, are given below:

(in Rs. Crore)

Year	Original	Revised	Actual	Actual (% BE)	Actual (% RE)
2020-21	44468.65	44811.00	47330.33	106.44	105.62
2021-22	50690.52	49006.30	48135.05	94.96	98.22
2022-23	51470.14	52878.08	57384.00	111.49	108.52
2023-24	60805.22	59119.55	55049.80	90.53	93.12
2024-25	67286.01	70709.65	68440.74 *(upto 31.01.2025)*	101.72	96.79

3.5 The details of targets and achievement regarding IEBR of CPSEs of the Ministry of Power, as furnished by the Ministry, are given below:

(in Rs. Crore)

Sr. No.	Name of CPSEs	F.Y. 2022-23			F.Y. 2023-24			F.Y. 2024-25		
		BE	RE	Actual	BE	RE	Actual	BE	RE	Actual
1	NTPC	22454.00	22454.00	26241.29	26241.29	22454.00	19443.53	22700.00	22700.00	28974.27
2	PGCIL	7500.00	8800.00	8850.00	8850.00	8800.00	11219.00	12250.00	20000.00	19480.00
3	NHPC	7361.05	7128.95	6464.85	6464.85	10857.22	7975.12	11193.19	10394.00	8278.43
4	SJVNL	8000.00	8000.00	8239.70	8239.70	10000.00	7581.53	12000.00	7000.00	4636.08
5	THDCIL	3207.54	3315.00	4615.02	4615.02	3900.41	5168.68	3440.96	5814.35	4280.11
6	NEEPCO	900.81	1133.26	849.45	849.45	2018.59	1133.77	1841.18	1387.00	548.60
7	DVC	2009.87	2010.00	2055.37	2055.37	2708.00	2370.95	3262.00	3116.30	1980.93
8	GCIL	36.87	36.87	68.32	68.32	67.00	157.22	30.00	298.00	262.32
Total		**51470.14**	**52878.08**	**57384.00**	**60805.22**	**59119.55**	**55049.80**	**66717.33**	**70709.65**	**68440.74** *(as on 31.01.2025)*

3.6 When the Committee desired to know about the reasons for variation between Budgetary Estimates, Revised Estimates and the Actual Expenditure, the Ministry submitted as under:

> "The reasons for variation between BE/RE and Actual Utilization in respect of Gross Budgetary Support (GBS) component are as follows:
> **2020-21**: During the year 2020-21 against the allocation of ₹15874.82 crore in BE and ₹10835.13 crore in RE, the actual expenditure was ₹ 10581.92 crore which is 97.66% of RE. The reduction of budget allocation at RE stage was decided by MoF on the basis of less expenditure due to COVID-19.
> **2021-22**: During the year 2021-22 against the allocation of ₹15322.00 crore in BE, allocation was enhanced to ₹18416.26 crore at RE/final supplementary stage, due to requirement of additional funds for DDUGJY/ IPDS schemes, being the sunset year. The actual expenditure was ₹17950.95 crore which is 97.47% of RE. So, there is no short fall in expenditure as such.
> **2022-23**: In FY 2022-23, Budget allocation was ₹16074.74 crore in BE. At RE 2022-23, budget allocation was ₹13106.58 crore. The actual expenditure incurred was ₹ 9312.98 crore which is 71.06% of RE. Actual expenditure was less due to delay in receipt of detailed project reports (DPRs) from State

Distribution Companies (DISCOMs)/Power Departments and delay in award of sanctioned works by the DISCOMs. With the implementation of newly introduced Treasury Single Account (TSA) module in FY 2022-23, the unspent balances lying with DISCOMs/Power Departments after 31st March of that financial year reverted to Consolidated Fund of India Account, so no unspent left with DISCOMs.

2023-24: In FY 2023-24, Budget allocation was ₹20671.32 crore in BE. At RE 2023-24, budget allocation was ₹17635.00 crore. The actual expenditure incurred was ₹16720.92 crore which is 94.82% of RE. Actual expenditure was less due to delay in getting possession of new office of Central Electricity Regulatory Commission (CERC), non-award of township package, delay in award and new norms for procurement in NER schemes etc. Further, Under Reform Linked Distribution Scheme (RLDS), Deen Dayal Upadhyaya Gram Jyoti Yojna (DDUGJY), Saubhagya etc, the unspent balances lying with DISCOMs/Power Departments after 31st March of that financial year reverted to Consolidated Fund of India Account, so interest loss to GoI.

2024-25: In FY 2024-25, Budget allocation was ₹20502 crore in BE. At RE 2024-25, budget allocation is ₹19845.00 crore. The expenditure incurred upto 31.01.2025 is ₹ 17037.03 crore."

3.7 The Ministry furnished the following details regarding quarter-wise utilization of budgetary allocations:

(in Rs. Crore)

FY (Allocation)		Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
2020-21 (15874.82-BE) (10835.13-RE)	Actuals (₹)	2170.00	2348.94	1538.32	4488.66	10581.92
	Percentage against RE	20.02	21.68	14.20	41.42	97.66
2021-22 (15322.00-BE) (18416.26-RE)	Actuals (₹)	1728.45	2790.49	3693.63	9738.38	17950.95
	Percentage against RE	11.28	18.21	24.10	52.87	97.47
2022-23 (16074.74-BE) (13106.58-RE)	Actuals (₹)	1411.40	4005.93	3248.10	647.55	9312.98
	Percentage against RE	10.77	30.56	24.78	4.94	71.06
2023-24 (20671.32-BE) (17635.00-RE)	Actuals (₹)	4929.84	2789.69	2541.88	6459.51	16720.92
	Percentage against RE	27.95	15.82	14.41	36.63	94.82
2024-25 (20502.00-BE) (19845.00-RE)	Actuals (₹)	2826.55	9280.70	3023.90	1905.88 *(upto 31.01.2025)*	17037.03 *(upto 31.01.2025)*
	Percentage against RE	14.24	46.77	15.24	9.60	85.85

3.8 When the Committee asked about the reasons for deviation in quarterly spending, the Ministry stated as under:

> "The progress of expenditure/release of scheme funds depends on various factors such as the time of receipt of proposals for release of funds, availability of utilization certificates which are due for the funds released in the past, position regarding unspent balances at the time of receipt of proposals, completion of the process of appraisal and approval of investment proposals. These factors are not always possible to be anticipated in advance."

3.9 The details regarding scheduled capacity addition and achievements, as furnished by the Ministry, are given below:

(All figures in MW)

Sector	Thermal		Hydro		Nuclear		Total	
	Scheduled	**Ach.**	**Scheduled**	**Ach.**	**Scheduled**	**Ach.**	**Scheduled**	**Ach.**
2020-21								
Central	5790.00	4080	300.00	300	0	0	6090.00	4380
State	4276.15	846.15	111.00	111	0	0	4387.15	957.15
Private	525	0	195.00	99	0	0	720.00	99
Total	**10591.15**	**4926.15**	**606.00**	**510**	**0**	**0**	**11197.15**	**5436.15**
2021-22								
Central	5400	2370	0.0	0	700	0	6100.0	2370
State	4360	1590	100.00	0	0	0	4460.0	1590
Private	525	525	393	393	0	0	918	918
Total	**10285**	**4485**	**493**	**393**	**700**	**0**	**11478**	**4878**
2022-23								
Central	3580	660	810	0	700	0	5090	660
State	2770	800	220	120	0	0	2990	920
Private	0	0	50	0	0	0	50	0
Total	**6350**	**1460**	**1080**	**120**	**700**	**0**	**8130**	**1580**
2023-24								
Central	6880	2920	2060	60	1400	1400	10340	4380
State	7820	2120	100	0	0	0	7920	2120
Private	0	364	720	0	0	0	720	364
Total	**14700**	**5404**	**2880**	**60**	**1400**	**1400**	**18980**	**6864**
2024-25 (till 31.01.2025)								
Central	6740	660	1050	0	1200	0	9740	660
State	8620	660	200	40	0	0	8820	700
Private	0	60	480	0	0	0	1200	60
Total	**15360**	**1380**	**1730**	**40**	**1200**	**0**	**19760**	**1420**

3.10 Further, the details regarding targets and achievements in respect of Transmission Lines and Transformation Capacity, as furnished by the Ministry, are given below:

Transmission Lines (of 220 kV & above voltage level) [in ckt. Km.]								
FY	**Central Sector**		**State Sector**		**Private Sector**		**Total**	
	Target	**Ach.**	**Target**	**Ach.**	**Target**	**Ach.**	**Target**	**Ach.**
2020-21	5889	7166	7964	7657	1938	1927	15791	16750
2021-22	3471	4676	12260	8939	3524	1280	19255	14895
2022-23	4035	3926	8661	6816	1885	3883	14581	14625
2023-24	2742	3938	11002	6993	2938	3272	16682	14203
2024-25 *(as on 31.12.2024)*	5431	1858	8254	3290	1586	812	15253	5960
Transformation Capacity (of 220 kV & above voltage level) [in MVA]								
2020-21	23870	21330	35970	32035	3210	4210	63050	57575
2021-22	34075	39575	39470	38407	8000	1000	81545	78982
2022-23	36195	30370	37764	40532	5000	5000	78959	75902
2023-24	23590	19720	44199	36008	10320	15000	78109	70728
2024-25 *(as on 31.12.2024)*	51645	20460	43970	22045	16820	3820	112435	46325

3.11 On being asked about the reasons for shortfall in achievement of scheduled targets, the Ministry stated the following:

"**Hydro Power Issues** - The main reasons for slow pace of development of hydroelectric potential in the Country are:

a) Land Acquisition Issues: Land acquisition is a persistent issue involved in implementation of Hydro Projects. Acquisition of land for various locations of the project such as Dam, HRT, Power House, Switchyard, etc. delay the commencement/progress of works.

b) Environment and Forest issues: Clearance process, multiple public hearings (due to lack of single point clearance), requirements of free flow stretch and e-flows retrospectively resulting in un-viability as well as redesigning/review of concurred schemes, resulting in significant delays.

c) Rehabilitation & Resettlement Issues is a sensitive issue arising out of dislocation of the people from their houses/workplaces etc. and their resettlement which involves a lot of time and money and often court cases resulting in delay in project execution/completion.

d) Inadequate infrastructural facilities due to remote location of hydro projects in relatively inaccessible areas/difficult terrains, which is one of the major reason for delays in project execution as substantial time is lost in creation of such facilities like Roads & Bridges and significantly add to the project cost.

e) Law & Order/Local issues due to protests by the local people against the construction activities like blasting, muck disposal etc. and demands for employment, extra compensation etc. often create law and order problems which delays the commencement and affects progress of the works.

f) Geological Surprises have delayed a large number of hydroelectric projects.

g) Natural Calamities like unprecedented rain/flash floods, cloud burst, earthquake etc sometimes, delay the completion of project.

h) Inter-state Issues: sometimes hydroelectric projects get delayed due to interstate disputes between the States.

Transmission Project Issues - Various challenges being faced with respect to transmission projects in the Country are mentioned below:

a) Issues relating to Right of Way (RoW), Land/crop compensation demanded by farmers/land owners and court cases linked to ROW issues.

b) Delay in getting approval from Forest.

c) Unexpected Route diversions of transmission lines to protect endangered species like Great Indian Bustards (GIB), coal mining areas etc.

d) Problems faced in acquiring land for construction of substations/ bay extensions in existing substations.

e) Contractual issues/deteriorating financial condition of executing agencies leading to slow progress of works and sometimes situation forces for cancellation of contract and awarding the contract to a new executing agency.

f) Difficulty in mobilizing manpower during festive seasons/monsoon/ winter months and Transportation of heavy equipment/material to site during monsoon months.

g) Execution in tough hilly terrain requiring more skilled labours and difficulty in transportation of material to site.

h) Unavailability/delay in supply of CRGO Electrical Steel as it is manufactured by limited foreign Countries.

i) Limited number of High-Voltage Direct Current (HVDC) systems manufacturers/vendors leading to higher cost and delayed supply.

Challenges in Thermal Power capacity addition:

a) Limited availability of EPC Contractors/Issues in qualifying criteria of Main plant: Genco's are mainly going for EPC contracts. BHEL, L&T are the two bidders participating as EPC contractors. In the recent tenders, it is observed that L&T is not submitting its bids and utilities are receiving practically single bid only.

b) Limited availability of Balance of Plant (BoP) vendors/issues in qualifying criteria of BoP: There were issues in availability of BoP vendors particularly in CHP, AHP, Cooling tower areas.

c) FGD technology is being used to meet the SO_2 emission norms. FGD technology being new to our country, there are at present limited vendors

with limited capacity to supply FGD components resulting in slow pace of FGD implementation."

3.12 On the issue of Fly Ash, Secretary, Ministry of Power deposed before the Committee as under:

"Our Ministry has issued very clear guidelines on the instructions of the Ministry of Environment for the disposal of fly ash. As per the guidelines of our Ministry, disposal of fly ash is done through auction method, whether it is local industries or any big project. For the local industries, we have said that you will keep a minimum reserve of 20% and there will be a separate auction for this, it will not be included in the general auction so that they can get fly ash at a slightly lower rate."

3.13 When asked about the Schemes/Programmes of the Ministry which have either been closed or proposed to be closed since Demands for Grants (2023-24), the Ministry stated the following:

"The Government of India launched 'National Smart Grid Mission (NSGM)' in March 2015 for planning, monitoring and implementing policies & programs related to Smart Grid in India. MoP *vide* letter no. 27/3/2017-IPDS (E-236958) dated 23rd September, 2022 sanctioned continuation of NSGM up to 31st March, 2024. The scheme was closed on 31st March, 2024."

CHAPTER – IV
MAJOR SCHEMES/PROGRAMMES OF THE MINISTRY

A) Revamped Distribution Sector Scheme (RDSS)

4.1 The Government of India launched the 'Revamped Distribution Sector Scheme: A Reforms-Based and Results-linked Scheme on 30.06.2021 with total outlay of Rs. 3,03,758 crores and Gross Budgetary Support of Rs. 97,631 crores over a period of five years from FY 2021-22 to FY 2025-26. Revamped Distribution Sector Scheme (RDSS) aims for improving the operational efficiencies and ensure financial sustainability of the distribution sector. These objectives are proposed to be met through financial assistance to DISCOMs for strengthening of supply infrastructure. The scheme is applicable to all State owned DISCOMs and State/UT Power Departments excluding Private DISCOMs. The financial assistance under the scheme is conditional to DISCOMs meeting the pre-qualification conditions and achieving basic minimum benchmarks in Result evaluation matrix based upon agreed upon Action Plan. The objectives of the Scheme are to:

- Improve the quality and reliability of power supply to consumers through a financially sustainable and operationally efficient Distribution Sector.
- Reduce the AT&C Losses to pan-India levels of 12-15%.
- Reduce ACS-ARR gap to zero.

4.2 The details regarding budgetary allocation and actual utilization for RDSS since its inception, as furnished by the Ministry, are given below:

(in Rs. Crore)

Year	BE	RE	Actual Expenditure
2021-22	0	1,000	814
2022-23	7,566	6,000	2,738
2023-24	12,072	10,400	10,064
2024-25	12,585	12,665	12,048 *(as on 10.02.2025)*

4.3 On being asked whether the amount allocated for RDSS was sufficient, the Ministry stated as under:

"RDSS is a reform-based result linked scheme and release of funds (except for 10% of Gross Budgetary Support (GBS) as an advance) under the scheme is contingent upon DISCOMs/Power Departments qualifying the annual evaluations for a particular financial year and based on the actual physical progress under the scheme. So far, the allocated funds have been sufficient to meet the ongoing expenditures under the scheme. Funds are getting released as per the scheme guidelines and are being utilized progressively.

Due to delay in award of projects in the initial years of the scheme, the budget utilization was slow. Now, the physical progress under the scheme has gained pace which would result in effective utilization. Continuous review meetings are being undertaken at the Nodal Agency and Ministry level for monitoring the progress of works to ensure effective utilization of funds. Based, on continuous engagement with the States, the requirement of funds is assessed after which allocation is made under the Budget."

4.4 When asked about the measures taken to ensure full utilization of the allocated amount, the Ministry stated as under:

"Ministry of Power is taking all necessary actions to ensure optimum utilization of the budget allocated for RDSS. Monitoring and review of works sanctioned and utilization of funds is being done by the Ministry on a regular basis. Weekly meetings are also conducted by Ministry of Power with the States and the nodal agencies for expediting the progress of sanctioned works and therefore the utilization of the sanctioned amounts.

Regular review meetings are being taken by senior officials of MoP with Nodal Agencies and MD/CMDs of distribution utilities to ensure timely utilization of funds. With concerted efforts, the utilities have so far utilized 96% of the funds released during FY 2024-25 (as on 10.02.2025)."

4.5 Regarding the performance vis-à-vis physical targets under RDSS, the Ministry furnished the following:

Description		**FY 2022-23**	**FY 2023-24**	**FY 2024-25**
Loss Reduction Works	Target	Award-80% of sanction cost	Award-85% of sanction cost	Physical completion-25%
	Achievement	64%	84%	Physical completion-25.3%
Smart Metering	Target	4 Crore	2 Crore (Revised)	5 Crore
	Achievement	0.57 Crore	1.04 Crore	2.08 Crore *(as on 10.02.2025)*

4.6 When asked about the constraints that are being faced in implementation of RDSS, the Ministry stated the following:

"The Ministry of Power is regularly following up with the States and distribution utilities on the progress of tendering, award and physical progress of the sanctioned works. The nodal agencies (i.e., REC and PFC) are handholding the utilities in resolving the issues, if any. As a result, the works have started picking up pace and effort is being made to complete the works within the Scheme timelines. The key challenges faced by the utilities in implementation of sanctioned infrastructure works are:

a) Delay in award of work due to administrative approvals in States

b) Delay in administrative approvals such as technical/financial evaluation, State Government approval, signing of agreements, GTP approval etc."

4.7 About extension of implementation period for Revamped Distribution Sector Scheme, the Secretary, Ministry of Power, deposed before the Committee as under:

"I would like to request you regarding RDSS that we will need extension of deadline by two years. As per our current implementation status, a lot of work remains to be done, especially in the case of smart meters. This will approximately take two years."

4.8 About Smart Meters, the Ministry furnished the following:

"Smart Metering supports Distribution Utilities in improving their financial viability through benefits such as improvement in billing and collection efficiency, automatic energy accounting, improved load forecasting, optimized power purchase costs and renewable energy integration through net metering. Under RDSS, Smart Metering is being implemented through the Advanced Metering Infrastructure Service Provider (AMISP) in TOTEX (Total Expenditure) mode, wherein Distribution Utilities are not required to incur upfront capital expenditure and pay per-month-per-meter cost to the AMISP. It is expected that as a result of improvement in billing and collection/power purchase optimization etc., Distribution Utilities will be able to pay the per-month-per-meter cost thus making it self-financing without any additional burden on the consumers. The reduction in losses and improved power purchase optimization would help in reducing the cost of power.

Under RDSS, Smart metering works with an outlay of Rs. 1,30,671 crores have been sanctioned for 45 DISCOMs in 28 States/UTs. This covers Smart metering of 19.79 Crore Consumers, 52.53 Lakh Distribution Transformers and 2.11 Lakh Feeders out of which more than 58% works have been awarded and are under different stages of execution.

Under RDSS, a maximum of Rs. 900/- (Rs. 1350/- in case of special category States) per meter in case of consumer meters, will be funded under the scheme. An incentive of maximum of Rs. 450 (Rs. 675) per consumer

meter is also provided for prepaid Smart meters installed within the targeted timeline. The funds for prepaid Smart Metering are made available to the utilities only after installation, commissioning and demonstration of at least one prepaid billing period in the area specified by the DISCOM in the DPR approved by the Monitoring Committee."

4.9 On being asked about the manufacturing capacity of Smart Meters in the Country, the Ministry stated as under:

"As per the information available, the manufacturing capacity of smart meters in the country is around 10 Crore meters per year and Indian Metering Industry has sufficient manufacturing capacity so as to meet the requirement of smart meters as per timelines under RDSS."

4.10 When asked about the constraints being faced in speedy installation of Smart Meters, the Ministry submitted the following:

"The installation of Smart meters has been affected due to the following reasons:

a) Smart meter being a new concept, there were delays in issue of tenders and establishment of direct debit facility.

b) Delays in testing and approvals like field installation and integration test, factory acceptance test and likewise."

4.11 Regarding installation of Smart Meters in the Country, concerned Joint Secretary, Ministry of Power deposed before the Committee as under:

"I would like to inform that about a year ago, our smart meter installation was going on at the rate of 11,000-12,000 per day. Then installation gradually increased to around 38,000 in April last year. Thereafter, it got delayed a bit due to elections. After that, it started increasing again. If we talk about September 2024, this figure reached 32,000 and 55,000 in October, 2024. At present, approximately 80,000 smart meters are being installed per day. In the coming time, it is expected to reach 100,000 per day. It is expected to touch the figure of 100,000 within the next 15-20 days/one month."

4.12 About household electrification under RDSS, the Ministry furnished the following:

"The Government of India is supporting States for grid electrification of left-out households during SAUBHAGYA, under the ongoing Revamped Distribution Sector Scheme (RDSS). In addition, all identified households belonging to Particularly Vulnerable Tribal Group (PVTG) under PM-JANMAN

(Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan) and tribal households under DA-JGUA (Dharti Aaba Janjatiya Gram Utkarsh Abhiyan) are also being sanctioned for on-grid electricity connection under RDSS, as per the Scheme guidelines. The details are given below:

Household Electrification sanctioned under RDSS (PVTG + Additional HHs + VVP)					
S. No.	**Name of State**	**Sanctioned Outlay (Rs. Crores)**	**Sanctioned GBS (Rs. Crores)**	**Total Households Sanctioned**	**Households Electrified as on 09.02.2025**
A.	**Additional HHs Sanctioned under RDSS**				
1	Rajasthan	459.18	275.51	1,90,959	64,368
2	Meghalaya	435.7	392.13	50,501	--
3	Mizoram	79.9	71.91	15,167	--
4	Nagaland	69.55	62.59	10,004	--
5	Uttar Pradesh	931.04	558.62	2,51,487	0
6	Andhra Pradesh	49.24	29.55	15,475	13,160
7	Jharkhand	7.47	4.48	872	--
8	Jammu & Kashmir	77.1	69.39	10,730	0
9	Bihar	300.26	180.16	42,584	0
10	Assam	785.55	706.99	1,27,111	--
11	Arunachal Pradesh	47.11	42.4	6,506	--
12	Manipur	214.44	193	36,972	--
13	Chhattisgarh	316.51	189.9	63,161	--
Total (A)		**3,773.04**	**2,776.64**	**8,21,529**	**77,528**
B.	**Electrification works sanctioned under RDSS in Vibrant Villages**				
1	Himachal Pradesh*	6.08	5.47	--	--
2	Arunachal Pradesh	20.18	18.16	1,683	--
3	Uttarakhand	13.08	11.77	1,154	--
Total (B)		**39.34**	**35.41**	**2,837**	**0**
C.	**Electrification of PVTG Households through Grid Connectivity under PM-JANMAN**				
C1	**Sanctioned under RDSS**				
1	Andhra Pradesh	88.71	53.23	25,054	24,613
2	Bihar	0.28	0.17	51	0
3	Chhattisgarh	38.17	22.9	7,077	6,461
4	Jharkhand	74.13	44.47	12,442	528
5	Madhya Pradesh	143.39	86.02	29,290	11,296
6	Maharashtra	26.61	15.96	8,556	9,216
7	Rajasthan	40.34	24.2	17,633	15,945
8	Karnataka	3.77	2.26	1,615	1,365
9	Kerala	0.86	0.52	345	312
10	Tamil Nadu	29.89	17.94	10,673	5,042
11	Telangana	6.79	4.07	3,884	3,884
12	Tripura	61.52	55.37	11,664	11,692
13	Uttarakhand	0.6	0.54	669	669
14	Uttar Pradesh	1.1	0.66	316	195
Sub Total (C1)		**516.15**	**328.31**	**1,29,269**	**91,218**
C2	**PVTG HH electrification covered under State Plan**				
1	Gujarat	--	--	--	6,626

2	Odisha	--	--	--	1,326
3	West Bengal	--	--	--	3,372
Sub Total (C2)		**--**	**--**	**--**	**11,324**
Total (C=C1+C2)		**516.15**	**328.31**	**1,29,269**	**1,02,542**
D.	**Electrification of DA-JGUA**				
D1	**Sanctioned Households**				
1	Chhattisgarh	11.98	7.19	2,550	0
2	Maharashtra	2.07	1.24	480	0
3	Tripura	40.69	36.62	7,677	0
4	Karnataka	30.53	18.32	3,682	0
5	Arunachal Pradesh	8.2	7.38	1,938	--
6	Telangana	110.73	66.44	26,525	--
Sub Total (D1)		**204.2**	**137.19**	**42,852**	**0**
D2	**Sanctioned Public Places**				
1	Tripura	2.31	2.08	512	0
2	Arunachal Pradesh	0.04	0.03	9	--
3	Telangana	2.9	1.74	672	--
Sub Total (D2)		**5.25**	**3.86**	**1,193**	**0**
Total (D=D1+D2)		**209.45**	**141.05**	**44,045**	**0**
Grand Total (A+B+C+D)		**4,537.99**	**3,281.39**	**9,97,680**	**1,80,070**

**Works sanctioned for strengthening existing distribution infrastructure and improving available voltage profile for covered Households*

4.13 When asked about the constraints that are being faced in electrification of households, the Ministry stated as under:

"The main constraints being faced in electrification of households are:

a) Timely conduct of surveys and preparation of Detailed Project Report (DPR) by Distribution utilities.
b) Remoteness of locations, inaccessible terrain, etc.
c) Availability of forest clearance/environment clearance.
d) Availability of nearby grid infrastructure.
e) Migratory population and issue of identification of households."

4.14 Regarding AT&C Losses in the Country, the Ministry furnished the following:

(in %)

Year	Government Sector DISCOMs (AT&C Losses)	Private Sector DISCOMs (AT&C Losses)	All India (AT&C Losses)
2018-19	22.26	14.70	21.65
2019-20	21.44	13.16	20.78
2020-21	22.60	13.86	21.91
2021-22	16.47	13.53	16.23
2022-23	15.78	10.94	15.37
2023-24	17.17	12.12	16.87

4.15 When the Committee specifically asked for details of the States where AT&C Losses have increased during the last five years, the Ministry furnished the following:

(in %)

States	FY 2019-20	FY 2023-24
Andhra Pradesh	11.19	12.05
Arunachal Pradesh	40.09	50.42
Maharashtra	19.30	23.85
Mizoram	37.05	39.19
Sikkim	28.77	54.60

4.16 On being asked about the States which are not able to follow the set trajectory regarding reduction in AT&C Losses, the Ministry furnished as under:

S. No.	State	Discoms	Unit	FY 2021-22		FY 2022-23	
				Target	Achievement	Target	Achievement
1	Delhi	NDMC	%	--	8.33	9	10.67
2	Gujarat	PGVCL	%	18.22	16.7	17.22	18.31
		UGVCL	%	7.35	6.71	7.3	9.35
3	Jharkhand	JBVNL	%	36	30.85	30	30.28
4	Kerala	TCED	%	8.54	16.46	8.35	7.08
5	Maharashtra	MSEDCL	%	20	16.76	18	19.04
6	Puducherry	PED	%	16.99	11.08	16.5	17.49

4.17 The details regarding financial performance of DISCOMs at National level, as furnished by the Ministry, are given below:

National Level Figures	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Borrowings / Total Outstanding Debt (Rs. Crore)	5,76,112	6,14,853	6,84,379	7,53,257
Accumulated (Losses)/Surplus as per Balance Sheet (Rs. Crore)	(5,45,418)	(5,84,071)	(6,47,913)	(6,92,269)
ACS-ARR Gap(Rs./unit)	0.63	0.10	0.46	0.21
Billing Efficiency (%)	84.17	86.13	87.00	86.72
Collection Efficiency (%)	92.77	97.27	97.27	95.86

B) Strengthening of Power Systems

4.18 The following works are included under Strengthening of Power Systems Programme:

a) "North Eastern Region Power System Improvement Project (NERPSIP) for Six (6) States (Assam, Manipur, Meghalaya, Mizoram, Tripura and

Nagaland) for strengthening of the Transmission and Distribution Systems (33kV and above).

b) Comprehensive Scheme for Strengthening of Transmission and Distribution System in Arunachal Pradesh and Sikkim.

c) Setting up of Renewable Energy Management Centre under Green Energy Corridor.

d) National Electricity Fund."

4.19 The details regarding Budgetary Estimate, Revised Estimate and the Actual Utilization under Strengthening of Power Systems Programme, as furnished by the Ministry, are given below:

(in Rs. Crore)

Year	Power System Improvement in North Eastern States excluding Arunachal Pradesh and Sikkim (NERPSIP)			Strengthening of transmission System in the States of Arunachal Pradesh and Sikkim (Comprehensive Scheme)			Green Energy Corridor (REMC)		
FY	**BE**	**RE**	**Received**	**BE**	**RE**	**Received**	**BE**	**RE**	**Received**
2020-21	770	281	281	800	300	300	33	18.67	18.16
2021-22	600	675.01	675.01	600	1600	1600	14.95	18.16	18.16
2022-23	644	973	820.77*	1700	1145.60	1100.71*	13.11	13.11	13.11
2023-24	987	600	375.40*	1400	1409.00	1110.67*	1.00	0.01	0
2024-25#	600.01	400@	200	1315.01	1214.66@	772	0.01	0.01	0

** Net receipt after lapse of funds in PFMS portal at the end of FY (on 31st March).*
@ POWERGRID has proposed Revised Estimate of ₹859.66 crore (iro CSST&DS) and ₹320 crore (iro NERPSIP).
 # upto 31.01.2025

4.20 About North Eastern Region Power System Improvement Project (NERPSIP), the Ministry submitted the following:

"It is implemented as Central Sector Scheme, with funding on 50:50 basis by Government of India & World Bank. The scheme aims to strengthen the Intra-State transmission & Distribution infrastructure of six states of North Eastern Region (Assam, Meghalaya, Manipur, Mizoram, Nagaland and Tripura); improve its connectivity to the upcoming load centers, and thus would extend the benefits of the grid-connected power to all the consumers. The project would also provide the required grid connectivity to such villages and towns of the States, where development of distribution system at the downstream level has been taking place under Government of India sponsored schemes. NERPSIP covers many transmission & distribution lines & sub-stations at 33 kV, 66 kV, 132 kV and 220 kV voltage levels. Other general details are as follows:

Date of Government approval	December 2014
Implementing Agency	PGCIL
Sanctioned Cost (Rs. Crore)	Rs. 5111.33 Crore (at February 2014 price level)
Revised Cost Estimates	Rs. 6700.00 Crore (approved in December 2020)
Funding	50:50 (Government of India: World Bank)
Completion schedule	December 2018 (48 months from the date of release of 1st installment)
Anticipated Schedule	June 2025

4.21 On being asked about the present status of North Eastern Region Power System Improvement Project (NERPSIP), the Ministry submitted the following:

"Out of 446 elements in six states, 443 elements are completed and remaining 03 elements are targeted to be completed by June 2025. The summary of element-wise progress is given below:

S. No.	State	Total Elements Sanctioned (Nos.)	Elements Completed (Nos.)
1	Assam	116	116
2	Manipur	71	71
3	Meghalaya	41	41
4	Nagaland	56	54
5	Mizoram	11	11
6	Tripura	151	150
Total		**446**	**443**

4.22 When asked about the reasons for delay in completion of North Eastern Region Power System Improvement Project, the Ministry stated as under:

"Major reasons that have affected the project progress are as under:

a) **Heavy Rainfall and lack of connectivity in NER**: The work is being hampered due to incessant rains, floods, landslides and limited access (road, bridge etc.) in the North-Eastern Region.

b) **Poor Financial Condition of Contactors**: Due to the poor financial health of the contractor, the progress of the project has hampered badly. Some contractors have entered into NCLT proceedings.

c) **Delay in handing over Substation lands**: 33/11 kV Lamphel and Takyel Sub Station (Manipur): There was a delay in handing over the land by MSPCL for both the substations. Moreover, the handed over lands are in very low soil bearing marshy area and necessitates pile foundations. Due to which, utilization of funds in FY22-23 has been affected.

d) **132/33 kV Tamenglong Sub Station (Manipur)**: The substation is situated at a very remote part of Manipur and is poorly connected by motorway. Further, approach road to the substation is in dilapidated

condition and becomes a major hurdle in monsoon season. In addition, law & order in that area also hindered the site progress from time to time.

e) **Upgradation of 66 kV Tuensang & Mokokchung Sub-stations in Nagaland**: These Substations in Nagaland approved/concurred in January 2022 with completion period of 2 years, which is under implementation and is expected to be completed by June 2025.

f) **220 kV D/C Rangia-Amingaon Line**: The balance work is hampered due to severe RoW in Sundarisal village, Distt. Kamrup, Assam. However, with the help of local administration and police protection, balance work of line has been completed and element has been commissioned in May 2024.

g) **Delay in route approval**: Substantial delay has occurred in route approvals from PWD in Assam for laying of 132 kV GMC-Kahilipara underground cable. However, the element has been commissioned in July 2023.

h) **RoW in 220 kV Killing-Mawngap-New Shillong Line (Meghalaya)**: Severe RoW due to huge compensation demand. Police protection was requested from the State administration and the issue was also highlighted in the PMG portal. However, with the help of local administration work has been completed and commissioned in November 2023.

i) **Forest Clearance for 02 nos. lines in Mizoram and Tripura**: 132 kV W.Phailing-Marpara line (Mizoram): The work was delayed due to the delay in approval of tree cutting in the line corridor (38.8 km) passing through Dampa Tiger Reserve. Although, the line work has been completed, but could not be commissioned due to non-availability of the upstream connectivity by Power & Electricity Department of Mizoram for feeding of power in 132/33kV W. Phailing and Marpara Substations.

j) **132 kV Rabindranar-Belonia Line (Tripura)**: Delay in providing working permission for section of the line (0.9 Ha) passing through the Garjee Reserve Forest (Gomati District), affected the progress of the works. However, line work has been completed, and both the circuits have been commissioned in January 2025.

k) Total SGST claim is ₹331.76 crore & reimbursement by the States is ₹189.34 crore till Janaury 2025."

4.23 Explaining about the completion schedule of North Eastern Region Power System Improvement Project, CMD, Power Grid Corporation of India Limited deposed before the Committee as under:

"There are currently only three elements that have not been completed in NERPSIP. One is Tuengsang and one is Pfutsero in Nagaland. Landslides occur due to frequent rains in Nagaland. In particular, the station in Pfutsero was almost built, but it has got damaged frequently due to landslides. We have talked to IIT, Guwahati for its solution. We are also taking consultancy

from IIT, Roorkee and taking action on the solutions suggested, but it will take another six more months to get completed.

In 18 km. long line from Agartala to Mohanpur in Tripura, 16 km. has been constructed. Work on 2 km. has also been completed but the same is not able to get charged due to R.O.W. issue.

If we look at it in physical terms, works will be completed in June, 2025 but due to the landslide issue, it may be completed by the end of the year. We have set a target of March, 2026 for completion of the entire project under NERPSIP in all respect."

4.24 About Comprehensive Scheme for Strengthening of Transmission and Distribution System in Arunachal Pradesh and Sikkim, the Ministry submitted the following:

"It is a centrally funded scheme being run in Arunachal Pradesh and Sikkim. In Arunachal Pradesh, only 05 out of 20 districts are connected to transmission network at 132/220kV. The 33kV system is the backbone of power distribution system in the State. Due to low population density spread over its geographical area of 84,000 Sq.km, power demand in Arunachal Pradesh is scattered over large distances. Hence, it is necessary to strengthen the 132kV network in the state for proper voltage management and lower distribution losses. Similarly, the distribution system in Sikkim mainly relies on 66kV network, which needs to be strengthened substantially. In view of this, it was proposed to take up projects for strengthening intra-state T&D systems of the two States through 31 new 132kV Sub-stations, 12 Substations of 66/11kV, 2153 km of transmission lines (132 & 220kV and 66kV) and 1923 km of transmission lines (33kV). The project is being implemented through POWERGRID. Other general details are as follows:

Date of Government approval	October 2014
Implementing Agency	PGCIL
Estimated Cost (Rs. Crore)	Rs. 4754.42 Crore
Revised Cost (Rs. Crore)	Rs. 9129.32 Crore (approved in March 2021)
Funding	Government of India
Approved Completion schedule	March 2025

4.25 On being asked about the present status of Comprehensive Scheme for Strengthening of Transmission and Distribution System in Arunachal Pradesh and Sikkim, the Ministry submitted the following:

"Out of 294 elements in the two states, 182 elements are completed and remaining 112 elements are targeted to be completed by March 2025 i.e. during FY 2024-25. The summary of element-wise progress is given below:

S. No.	State	Total Elements Sanctioned (Nos.)	Elements Completed (Nos.)
1	Sikkim	55	41
2	Arunachal Pradesh	239	141
Total		**294**	**182**

4.26 When asked about the constraints and challenges being faced in completion of Comprehensive Scheme for Strengthening of Transmission and Distribution System in Arunachal Pradesh and Sikkim, the Ministry stated as under:

"Major reasons which affected the progress of work are:

a) **Delay in Compensation issues in Reserve Forest in Arunachal Pradesh**: Present compensation policy in Reserve Forest is being reviewed by Arunachal Pradesh state for resolving the RoW issues in Reserve Forest area.

b) Severe RoW in 02 nos. lines in Namchi District in Sikkim due to demand of higher Compensation.

c) **Non transportation of Transformers due to road widening issue**: Transportation of Transformers to 132/66 kV Perbing GIS Sub-station in Sikkim has been delayed due to Road widening and construction of new bridge in Luing area. The transformer is temporarily stored at Binaguri Sub-station of POWERGRID and yet to be transported to Perbing Sub-station due to pending road widening, even though the Bridge has been constructed recently.

d) **No work in the elements under North Sikkim in FY 2024-25**: In Sikkim, severe flash flood occurred on 4th October 2023 in Teesta River, which caused extensive damage to connecting road & bridges near Chungthang and Munshithang area of North Sikkim. The situation worsened in June 2024 due to heavy rains and landslides, which washed away roads and bridges in the Naga area, and they are yet to be restored. Due to this, restoration work at Lachen S/s is yet to start, as after flash floods it got disconnected due to washout of multiple bridges from Chungthang to Lachen. Further, the approved sources for construction materials have also been washed away in floods. A new route to Lachen was opened in last week of December 2024, however, presently only Army & light tourist vehicles are allowed to ply. Further, POWERGRID has requested Ministry of Power and Government of Sikkim for descoping of this element from the Comprehensive Scheme.

Further, the connecting bridges to Passingdong S/s from Mangan got washed away. The route to Passingdong was made approachable through a newly built Sankhalang bridge. However, the same got washed out during cloudburst rainfall in June 2024. Presently, the S/s is being accessed through

a longer alternate route i.e., via route from Mangan-Phidang-Dzongu-Passingdong.

e) **Non transportation of Transformers due to limited load carrying capacity of Rang Rang Bridge**: The 25 MVA Transformer for 132/66 kV Singhik S/s in Sikkim could not be transported to Sub-station site due to limited load carrying capacity of Rang Rang Bridge which is at the entry point of North Sikkim. The present load carrying capacity as notified by State PWD is restricted to 20 MT while the self-weight of 25 MVA Transformer is 35 MT excluding weight of Trailer.

Further, the connecting road NH-10 between West Bengal & Sikkim has also been damaged at multiple patches, and heavy vehicle movements are restricted, affecting the construction activities and associated expenditure.

f) Annulment & re-award of several packages due to poor performance of the agency.

g) Resistance by the locals in Dzumsa Area in Sikkim."

4.27 Regarding National Electricity Fund, the Ministry submitted the following:

"The Government of India approved setting up of the National Electricity Fund in 2012 at an outlay of Rs 25,000 crore to provide interest subsidy on loans disbursed to the State Power Utilities over a period of 14 years to augment and strengthen the Distribution sector infrastructure. Under the scheme, interest subsidies are given on loans taken for distribution infrastructure projects in areas not served by the erstwhile Rajiv Gandhi Gramin Vidyutikaran Yojana (RGGVY) and Restructured Accelerated Power Development and Reforms Programme (R-APDRP) schemes. Subsidies are admissible on the interest accrued on the basis of achievements against specific reform measures, i.e. reduction in AT&C losses; reduction in revenue gap (Average Cost of Supply (ACS) – Average Revenue Realized on subsidy received basis); and, return on equity and multi year tariff (MYT). Based on the consolidated score achieved on achievement against these parameters, the utilities are eligible for subsidy in interest rates from 3% to 5% in States other than Special category and focused states and 5% to 7% in Special Category and focused states.

Total 920 projects have been approved with sanctioned amount of Rs. 24100 crore in respect of 24 DISCOMs in 14 States. Cumulative disbursement of loan amount of Rs.20,424 crore had been made by the lenders. Further, till date a sum of Rs. 2468.3772 crore has been released as interest subsidy to 24 number of DISCOMs from 14 States/UTs since inception."

4.28 The details regarding Budget Estimates, Revised Estimates and Actual Expenditure incurred under the National Electricity Fund Scheme, as furnished by the Ministry, are given below:

(in Rs. Crore)

FY	Budget Estimate	Revised Estimate	Expenditure on release of Interest-subsidy	Expenditure on Nodal Agency Service Charges	Expenditure on Payment to Independent Evaluator	Other Incidental Charges	Total Actual Expenditure
2014-15	50.69	1	1	0	0	-	1
2015-16	20	7	7	0	0	-	7
2016-17	25	9	8.9269	0.0731	0	-	9
2017-18	10	75	67.9885	6.8471	0.1109	0.0535	75
2018-19	75	108	90.1621	17.8379	0	-	108
2019-20	75	75	74.625	0	0.375	-	75
2020-21	200	200	199.00	1.00	0	-	200
2021-22	200	1000	999.4496	0	0.5504	-	1000
2022-23	582.89	582.89	582.1866	0	0.703412	-	582.89
2023-24	500	538	432.0188	21.69	0	-	453.7088
2024-25 *(upto 10.02.2025)*	500	200	6.0197	-	0.2972	-	6.3169
Total			**2468.3772**	**47.4481**	**2.036912**	**0.0535**	**2517.9157**

C) Viability Gap Funding (VGF)

4.29 Regarding Viability Gap Funding Scheme for development of Battery Energy Storage Systems, the Ministry submitted the following:

> "The Government has approved the Viability Gap Funding (VGF) for development of Battery Energy Storage Systems. The scheme has set a target of adding at least 4,000 MWh of BESS by 2027-28 by providing a VGF of Rs 3,760 crore in the form of Capital subsidy. Under this Scheme a VGF support will be provided for Battery Energy Storage Systems (BESS) to be approved during a period of three years viz. 2023-24, 2024-25 and 2025-26 and the disbursement of funds shall be in 5 tranches i.e. 10% on the financial closure of the project, 45% on the COD of the project and 15% year wise up to 3 years from the COD of the project.
>
> Due to decline in prices of BESS in recent past, higher capacity of BESS around 13,200 MWh is envisaged under the VGF scheme within the sanctioned limit of total VGF amount of Rs. 3,760 crore under three components with breakup as under:
>
> a) **Market component**: First tranche with 1000 MWh BESS capacity and Rs 46 lakh/MWh as VGF (total VGF is Rs 460 Crore) is allocated to NTPC

Vidyut Vyapar Nigam (NVVN). 1200 MWh has been allocated to SECI, identified as BIA, under Market mechanism Tranche-II, with VGF support of Rs 27 lakh/MWh (total VGF is Rs 324 Crore).

b) **State component**: 6000 MWh has been allocated to 8 states viz. Rajasthan, Tamil Nadu, Karnataka, Gujarat, Maharashtra, Telangana, Bihar and Kerala, providing VGF of Rs 27 lakh/MWh (total VGF is Rs 1,620 Crore).

c) **CPSU component**: 5000 MWh has been allocated to NVVN, NHPC and SJVN under the CPSU component with VGF support of Rs 27 lakh/MWh (total VGF is Rs 1,350 Crore)."

4.30 The details of the budgetary allocation and actual utilization for Viability Gap Funding Scheme, as furnished by the Ministry, are given below:

(in Rs. Crore)

Year	BE	RE	Actual expenditure
2024-25	96	46	0
2025-26	200	-	-

4.31 On being asked about the physical targets and achievement so far, the Ministry stated as under:

"Due to decline in prices of BESS in recent past, higher BESS capacity of 13,200 MWh is envisaged under the VGF scheme. The selection of bidders for the development of 500 MW/1000 MWh BESS capacity under Tranche-I through Market Mechanism has been completed on 22.10.2024. Battery Energy Storage Purchase Agreement (BESPA) has been signed by NVVN on 23.12.2024. Under the State component, Letter of Award (LoA) has been issued for 2500 MWh BESS capacity including 1000 MWh in Gujarat, 500 MWh in Maharashtra and 1000 MWh in Rajasthan."

4.32 About implementation schedule of the Viability Gap Funding Scheme for development of Battery Energy Storage Systems, the Secretary, Ministry of Power deposed before the Committee as under:

"This will take two years. We have given a target to all the States and Implementing Agencies to award all the contracts by June, 2025 and thereafter it will take about 18 to 24 months."

D) Power System Development Fund (PSDF)

4.33 About the Power System Development Fund, the Ministry submitted the following:

"PSDF is a Regulatory Fund constituted by Central Electricity Regulatory Commission (CERC) *vide* CERC (PSDF) Regulations 2010, notified on 4th June 2010. As per the regulation, Regional Load Despatch Centre (RLDCs) & National Load Despatch Centre (NLDC) shall collect the charges viz. Deviation Settlement/Unscheduled Interchange (DSM/UI) Charges, Congestion due to market splitting in the Power Exchange, Charges on account of E-bidding under Short Term Open Acess (STOA), Congestion Charges in real-time and Reactive Energy Charges and transfer the residual amount to PSDF.

The operationalization of PSDF was approved by the Government of India, in January 2014, for utilization of the amount collected in PSDF for improvement in operation, reliability and security of the Indian Power System. Further, the Government in June 2023 approved the continuation of the Scheme for operationalization of the Power System Development Fund (PSDF) for the 15th Finance Commission cycle with an outlay of ₹11,000 Crore and ₹2000 Crore as contingent requirement from F.Y. 2021-22 to F.Y. 2025-26.

Objectives of the scheme: - The objective of the PSDF is to utilize the funds to bring improvement in the security & Reliability of the Indian Power System. To achieve the above goal the following types of projects are being funded from PSDF:

a) Creating necessary transmission systems of strategic importance.

b) Installation of reactive energy generators for improvement of the voltage profile in the Grid.

c) Installation of standard and special protection schemes, pilot and demonstrative projects, any communication/measurement/monitoring scheme including installation of Phaser Measurement Units (PMUs) etc.

d) Renovation and Modernization (R&M) of transmission and distribution systems for relieving congestion.

e) Creating necessary support for integration of Renewable Energy like solar, wind, hybrid system and creation of adequate energy storage capacity.

f) Any other scheme/project in furtherance of the above objectives, such as, conducting technical studies and capacity building, etc.

Eligible entities: -Regional Power Committees, Generating Companies, Transmission Licensees, Distribution Licensees and Load Dispatch Centers and Public Sector undertaking (PSUs) primarily working in the power and Renewable Energy Sector only are eligible for funding under PSDF. Private sector projects are not eligible for assistance from PSDF."

4.34 The details of the budgetary allocation and its utilization under Power System Development Fund, as furnished by the Ministry, are given below:

(in Rs. Crore)				
Name of the scheme		**Approved outlay 2024-25 (RE)**	**Expenditure incurred 2024-25** *(upto 12.02.2025)*	**Approved outlay 2025-26 (BE)**
Head	Creation of capital Assets	730.30	727.49	646.46
	Professional charges (Nodal agency charges)	0.50	0.50	1.00
	Grant in aid general (Interest on EBR)	469.20	386.30	452.62
Total	Power System Development Fund (PSDF)	1200.00	1114.29	1100.08

4.35 The Ministry submitted the following about status of approved Projects and funds released under Power System Development Fund:

> **"Status of Implementation of projects approved & fund utilization: -**Since its operationalization in 2014, a total of 205 projects have been sanctioned for funding through PSDF for the improvement of the Regional and National Power System with total sanction grant of ₹16419.99 Crore.
> **Status of the Approved projects: -** As of now, 95 projects have been completed successfully, 17 projects were de-sanctioned and remaining projects are under various stages of execution.
> **Status of Funds released: -**As of now an amount of ₹10860.29 Crore has been disbursed for the projects approved through PSDF."

E) Scheme for Promoting Energy Efficiency Activities in Different Sectors of the Indian Economy

4.36 About the Scheme for Promoting Energy Efficiency Activities in Different Sectors of the Indian Economy, the Ministry stated the following:

> "The Bureau of Energy Efficiency (BEE) has been actively implementing various schemes to enhance energy efficiency across different sectors in India. One of the key initiatives is the Standards & Labelling (S&L) Program, which helps consumers make informed decisions by rating appliances based on their energy efficiency. Currently, 38 appliances are covered under this program, with 16 under mandatory labeling and 22 under voluntary labeling. This initiative aims to reduce energy consumption at the end-user level while maintaining service quality.
>
> In the building sector, the Energy Conservation and Sustainable Building Code (ECSBC) has been developed to regulate energy efficiency in commercial and residential buildings. This code sets minimum energy performance standards and promotes sustainability features. As of December 2024, 25 states and Union Territories have notified ECSBC, and 13 states

have integrated it into municipal by-laws, covering 476 urban local bodies (ULBs). Additionally, the Star Rating Program for commercial buildings rates structures on a 1-5 scale based on their energy performance, encouraging businesses to adopt energy-efficient practices.

Strengthening the institutional capacity of states is another focus area. State Designated Agencies (SDAs) have been designated across 36 states and Union Territories to implement energy efficiency measures. So far, 35 states have developed State Energy Efficiency Action Plans (SEEAP), and 31 states have established State Level Steering Committees on Energy Transition to drive energy efficiency initiatives.

The Demand Side Management (DSM) program is crucial in reducing peak electricity demand. Under Agriculture DSM (AgDSM), BEE promotes energy-efficient pump sets and conducts training programs for farmers. Municipal DSM (MuDSM) focuses on optimizing energy use in municipal water supply systems and street lighting. The Capacity Building of DISCOMs initiative helps power distribution companies adopt DSM measures by deploying energy-efficient transformers and providing technical expertise.

In the Micro, Small, and Medium Enterprises (MSME) sector, BEE has conducted energy mapping studies and launched the URJA Mitra initiative to assist SMEs in adopting energy-efficient technologies. More than 150 clusters have been analyzed for energy savings, and over 870 MSME units are benefiting from energy-efficient technologies.

The National Energy Conservation Awards (NECA) is another initiative that recognizes and rewards industries and institutions for their efforts in improving energy efficiency. Since its inception in 1991, NECA has grown significantly, attracting participation from various stakeholders.

In the transport sector, BEE has introduced Corporate Average Fuel Economy (CAFE) norms for passenger vehicles, fuel economy standards for heavy-duty vehicles, and a star rating program for tyres based on rolling resistance, all of which contribute to reducing fuel consumption and emissions.

BEE is also playing a pivotal role in promoting electric mobility by facilitating the deployment of public EV charging infrastructure and running the Go Electric campaign to raise awareness about electric vehicles. The EV Yatra mobile app has been developed to assist EV users in locating charging stations across India.

The Energy Service Company (ESCO) model has been instrumental in financing energy efficiency projects. BEE has empaneled 127 ESCOs and developed standardized guidelines to encourage investment in energy efficiency. Additionally, energy-efficient cold storage solutions are being promoted to reduce post-harvest losses in India’s agricultural sector, with a voluntary labeling program for refrigerant compressors launched in 2024.

To support India's decarbonization efforts, the Indian Carbon Market (ICM) has been introduced. This framework facilitates carbon credit trading,

encouraging industries to adopt energy-efficient practices while meeting emission reduction targets.

These initiatives collectively contribute to India's energy transition by fostering energy efficiency in industries, buildings, transport, and municipalities, ultimately reducing energy consumption and promoting sustainability."

4.37 The details of the budgetary allocation and its utilization under Scheme for Promoting Energy Efficiency Activities in Different Sectors of the Indian Economy and other Energy Conservation Schemes, as furnished by the Ministry, are given below:

(in Rs. Crore)

Year	Schemes	BE	RE	Actual Expenditure
2020-21	Promoting Energy Efficiency Activities in different sectors of Indian Economy	100.16	56.32	56.00
	Energy Conservation Schemes	109.99	36.95	5.00
2021-22	Promoting Energy Efficiency Activities in different sectors of Indian Economy	115.82	115.82	115.82
	Energy Conservation Schemes	80.00	40.00	40.00
2022-23	Promoting Energy Efficiency Activities in different sectors of Indian Economy	153.00	113.00	77.16
	Energy Conservation Schemes	55.00	30.00	0.00
2023-24	Promoting Energy Efficiency Activities in different sectors of Indian Economy	101.80	31.56	84.39
	Energy Conservation Schemes	30.90	30.40	34.49
2024-25 *(as on 15.01.2025)*	Promoting Energy Efficiency Activities in different sectors of Indian Economy	96.10	38.00	25.83
	Energy Conservation Schemes	39.05	25.00	24.50

4.38 When asked about the constraints being faced in implementation of Energy Efficiency and Conservation Schemes, the Ministry stated as under:

"State Designated Agencies (SDAs) are responsible for facilitating and enforcing the efficient use of energy and its conservation at the state level. However, most of the SDAs are existing organizations that have been assigned the additional responsibility of energy efficiency and conservation. Only two States, Kerala and Andhra Pradesh, have established Standalone SDAs.

Energy efficiency and conservation require coordinated involvement of various State Departments such as Industry/MSME, Urban Development, Urban Local Bodies, Public Works, Rural Development, Transport, Agriculture, and DISCOMs."

CHAPTER – V
DEVELOPMENT OF POWER SECTOR IN NORTH-EASTERN REGION AND WELFARE OF SCs/STs

5.1 Besides North Eastern Region Power System Improvement Project and Comprehensive Scheme for Strengthening of Transmission and Distribution System in Arunachal Pradesh and Sikkim, the Government of India has been helping the North-Eastern States through its various Schemes including Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY), Saubhagya and Revamped Distribution Sector Scheme. Further, the availability and access to power in the North-Eastern Region are proposed to be enhanced by accelerating the development of the Hydro Sector.

5.2 The details regarding utilization of funds under RDSS in North-Eastern Region (NER), as furnished by the Ministry, are given below:

(in Rs. Crore)

Year	RE of RDSS (Budget Allocated)	NER share	Release to NER	Funds Lapsed/ returned/ unspent by NER	Actual Release to NER
FY 2021-22	999.98	0	0	0	0
FY 2022-23	6,000	483.57	421.08	62.49	421.08
FY 2023-24	10,400	1,040	1,040	0	1,040
FY 2024-25 *(as on 10.02.2025)*	12,665	1,036	1,035.95	-	-

5.3 The details regarding BE, RE and Actual Utilization of funds under Budgetary Support for Flood Moderation for Dibang MPP (2,880 MW) in Arunachal Pradesh, as furnished by the Ministry, are given below:

(in Rs. Crore)

FY	BE	RE	Actual utilization
2020-21	0.0	0.1	0.0
2021-22	0.0	0.0	0.0
2022-23	0.0	0.1	0.0
2023-24	0.01	109.0	109.0
2024-25	449.25	493.06	437.86

5.4 The details regarding BE, RE and Actual Utilization of funds under Grant for Downstream Protection works of Subansiri Lower Project (2,000 MW) in Arunachal Pradesh, as furnished by the Ministry, are given below:

(in Rs. Crore)

F.Y.	BE	RE	Funds Released by MoP	Utilized by NHPC
2020-21	--	105.0	--	--
2021-22	145.00	74.07	74.07	20.68
2022-23	56.98	56.98	3.98	58.60
2023-24	56.98	56.98	56.98	54.52
2024-25	51.98	40.00	29.67	26.10 *(upto January 2025)*

5.5 The Ministry submitted that no project developers in North Eastern Region has availed the grant under the Scheme of Budgetary Support towards Enabling Infrastructure so far.

5.6 About the Special Component Plans for Scheduled Castes and Tribal Areas, the Ministry furnished the following:

> "In order to ensure direct policy driven benefits for the SCs, STs, Tribal Areas and North-Eastern Region Areas, SC Sub-Plan (SCSP), Tribal Area Sub-Plan (TASP) and other special component plans were introduced. Under these Plans, funds are earmarked for SCs, STs, etc. under separate budget heads for each Ministry of GoI. The allocation includes programmes benefitting SC/ST hamlets or designing of new appropriate development programmes."

5.7 On being asked about the allocation and utilization of funds for implementation of these Sub-Plans, the Ministry furnished the following:

Financial Year	SCSP Head (in Rs. Crore)		TASP Head (in Rs. Crore)	
	Allocated	**Utilized**	**Allocated**	**Utilized**
IPDS/R-APDRP				
2020-21	495.00	495.00	165.00	165.00
2021-22	650.00	633.77	318.00	316.00
DDUGJY				
2020-21	403.00	403.00	227.00	226.96
2021-22	783.52	783.52	405.92	405.92

RDSS						
Financial Year	**SCSP Head (in Rs. Crore)**			**TASP Head (in Rs. Crore)**		
	BE	**RE**	**Expenditure**	**BE**	**RE**	**Expenditure**
2022-23	1246.25	678.92	318.79	584.09	388.74	194.73
2023-24	2042.41	1726.00	1272.03	957.23	900.00	763.36
2024-25	2089.11	2089.00	2059.10 (as on 13.02.2025)	1082.31	1082.00	933.09 (as on 13.02.2025)

5.8 When asked about the mechanism to ensure that the allocated funds are utilized for the benefit of the targeted group of people, the Ministry stated as under:

> "Under schemes of DDUGJY, IPDS/R-APDRP, Monitoring/Steering Committee had sanctioned projects for implementation of schemes across States covering entire population of approved project areas, without any reference to SC/ST population since identification of individual beneficiary of scheme was not feasible under these schemes. The projects benefitted all the constituents of the project areas including the SC/ST and Tribal populations.
>
> Ministry of Power (MoP) has been releasing funds under SCSP/TASP components of RDSS to the beneficiary State Power DISCOMs based on percentage of State's SC/ST population in Census 2011 using an indirect methodology of proportionate utilization. In addition to the regular system strengthening and smart metering works sanctioned under RDSS, MoP has also sanctioned specific works for electrification of PVTG Households (PM-JANMAN Scheme) and other ST Households (DA-JGUA Scheme) funded under RDSS, wherein the projects have been sanctioned for the benefit of identified ST households and funds are being released by MoP for implementation of these projects directly out of TASP budget sub-heads of RDSS."

CHAPTER – VI
STATUTORY/AUTONOMOUS BODIES UNDER THE ADMINISTRATIVE CONTROL OF THE MINISTRY

A) Central Electricity Authority (CEA)

6.1 The details of budgetary allocation and utilization in respect of Central Electricity Authority, as furnished by the Ministry, are given below:

(in Rs. Crore)

Year	BE	RE	Actual Expenditure
2020-21	130.66	126.27	113.95
2021-22	130.66	127.80	113.70
2022-23	121.00	124.88	124.18
2023-24	135.04	140.92	126.17
2024-25	152.90	150.84	120.97 *(up to 31.01.2025)*

6.2 On being asked about the sufficiency of the funds and measures undertaken by CEA to ensure full utilization of the allocated amount, the following was stated:

> "Funds allocated were sufficient for many suitable provisions. However, some heads (viz DTE, FTE, and Training Expenses) were getting less allocation. This results in less capacity building, due to low-mobility of the officials. It also affects physical monitoring of various ongoing projects as well as attending crucial meetings/training programs both domestically and internationally. Following measures are proposed for full utilization of the allocated amount:
>
> a) Periodic monitoring at the level of Chairperson CEA with all Divisions/subordinate offices.
>
> b) Thread bare scrutiny of expenditure statements and realistic assessment of future budgetary requirements.
>
> c) To follow up as per extant guidelines of Department of Expenditure on a regular basis.
>
> d) BE for 2025-26 has been conveyed to all the wing heads and a plan of action for utilization of funds has been solicited in advance."

6.3 When asked about the constraints that CEA has been facing in achievement of its objectives, the following was furnished:

> "a) Timely availability of data from States to carry out Resource Adequacy Studies for the states.
>
> b) Availability of only one license of the state-of-the-art Computer Generation Expansion planning model with CEA.

c) Issues in assessment of Comprehensive Cost trajectory of upcoming/ New Technologies e.g., CCUS, AUSC etc. which has to be taken in consideration while carrying generation expansion planning studies."

6.4 On being asked about the expectations of CEA from the Central Government/ Ministry/State Governments regarding achievement of its goals/targets/objectives, the following was submitted:

"The fundamental key to effective functioning of CEA is the availability of comprehensive and qualitative statistics from all the stakeholders of the power sector. The availability of these statistics in a seamless manner would enhance the planning and operational interventions of CEA for coordinated development of the power sector. Further, the Regulations framed by CEA are required to be complied with by all the entities of power sector to ensure reliable and safe operation of the power system."

B) Central Power Research Institute (CPRI)

6.5 The details of budgetary allocation and actual utilization in respect of CPRI, as furnished by the Ministry, are given below:

(in Rs. Crore)

Budgetary Allocation					Grant in aid for creation of capital assets	Grant in aid General	Actual Utilization
Year	Budget Estimates	Revised Estimates	Unspent Balance	Grant Received	Capital Expenditure (A)	R&D Expenditure (B)	Actual Expenditure (A+B)
2020-21	200.00	80.00	6.31	80.00	29.75	3.88	33.63
2021-22	180.00	120.01	52.68	120.00	142.54	18.75	161.29
2022-23	302.77	202.40	11.39	174.96	168.36	17.98	186.34
2023-24	208.00	150.00	-	144.55	124.40	19.55	143.95
2024-25	180.00	140.00	-	110.1885	63.13	2.671	65.801

6.6 The details regarding physical targets and achievements with respect to CPRI are given below:

Parameters		2021-22		2022-23		2023-24	
		Target	Achievement	Target	Achievement	Target	Achievement
Revenue (in Rs. Crore)		215	131.39	236.5	179.26	236.5	227.23
Papers	National	100	37	100	29	100	40
	International	135	62	135	79	135	120
Seminars/Workshops/ Webinars/Training Programme		75	57	75	69	35	88
Research Projects		18	18	18	18	18	19
Patents		5	8	5	4	5	16

6.7 On being asked about the sufficiency of the funds and measures undertaken by CPRI to ensure full utilization of the allocated amount, the following was furnished:

> "The funds allocated to CPRI were sufficient and the Institute was able to utilize a major part of the funds allocated to carry out its activities. To ensure full utilization of the allocated amount, the Institute was advised by MoP to submit proposals well in advance along with utilization certificates regularly so that funds could be released in time."

6.8 When asked about the constraints that CPRI has been facing in achievement of its objectives, the following was stated:

> "No serious constraints. With the continuous grant-in-aid from the MoP, CPRI consistently upgraded its test facilities. This support enables CPRI to meet the needs of the electrical industry by developing products indigenously and conducting comprehensive testing of electrical equipment."

6.9 On being asked about the expectations of CPRI from the Central Government/Ministry/State Governments regarding achievement of its goals/targets/ objectives, the following was submitted:

> "The institute needs to identify gaps in the current research areas of the power sector and collaborate with the industry and academia to come up with innovative solutions and then conduct research on the emerging technologies to assist Energy transition goal of the Nation. The Institute expects continuing financial and policy support from the Government."

C) National Power Training Institute (NPTI)

6.10 The details of budgetary allocation and actual utilization in respect of NPTI, as furnished by the Ministry, are given below:

(in Rs. Crore)

Year	BE	RE	Grant Released by MoP	Actual Expenditure
2020-21	82.34	25.96	18.45	18.45
2021-22	70.00	16.07	16.07	16.07
2022-23	50.00	30.00	14.35	14.35
2023-24	35.00	35.00	22.93	22.93
2024-25	50.00	25.00	23.61	-

6.11 The details regarding physical targets and achievements with respect to NPTI are given below:

Sl. No.	Performance Parameter	Target 2021-22	Achieved 2021-22	Target 2022-23	Achieved 2022-23	Target 2023-24	Achieved 2023-24
1.	No. of Trainees	18,607	15,209	20,000	71,727*	35,818	15,141
2.	Trainee Weeks (T-W)	77,922	34,502	77,922	52,468	77,922	43,105
3.	Revenue Earnings (Rs. Lacs) $	4500	2915.02	4950	7970.46@	6127	9623.66@
4.	Excess Revenue over Expenditure with Depreciation (Rs. Lacs)	-495.15	-7850.03	745	-462.99	983	1598.91

**50,262 Girl Students trained under Special Program on Capacity Building on Energy Conservation at various KGBVs in UP State.*
$ including interest earned on investments
@ Including amortization of grants of Rs. 1958.24 Lakhs for FY 2022-23 & Rs. 1470.09 Lakhs for FY 2023-24 (Balance Sheet Schedule 3 &18)

6.12 On being asked about the sufficiency of the funds and measures undertaken by NPTI to ensure full utilization of the allocated amount, the following was furnished:

> "The amount allocated to NPTI was sufficient. The Government of India provide funds to NPTI for meeting the requirement of its pension liabilities and for creation/upgradation of infrastructure in its Institutes spread across the Country. To ensure full utilization of the allocated amount, the Institute was advised by MoP to submit proposals well in advance along with utilization certificates regularly so that funds could be released in time."

6.13 When asked about the constraints that NPTI has been facing in achievement of its objectives, the following was stated:

> "There are no major constraints as such for NPTI in achieving its objectives. With the continuous grant-in-aid support from the MoP, NPTI has consistently upgraded its training facilities."

6.14 On being asked about the expectations of NPTI from the Central Government/Ministry/State Governments regarding achievement of its goals/targets/objectives, the following was submitted:

> **"**a) NPTI should cater to Indian Power Sector requirements which are dynamically changing with technology integration & Energy Transition Path.

b) NPTI should act as a resource centre of MoP for Training & Capacity Building for Power Sector.

c) The Institute should focus and develop syllabus of global standards on Power sector training in the areas of Smart Power Distribution System, Smart Transmission and Smart Generation including Renewable Energy, Electric Vehicle & Battery Energy Storage system, Carbon Neutrality, RE and Microgrid, Green Hydrogen, Energy Transition & Energy Efficiency, SCADA, Smart Grid & Smart Metering (SSS), Ultra Supercritical and Advanced Ultra Supercritical Technologies, Cyber Security & IoT etc.

d) The institute expects continuing financial and policy support from the Government."

6.15 When asked about the main areas/fields of the Power Sector where there is an acute shortage of trained manpower, the following was stated:

"As per various studies, following are the areas where shortage of trained manpower may be felt:

a) **Lack of Cyber Security expertise**: With the advancement in technology, Cyber security is increasingly becoming critical to any organization. However, there are not enough qualified individuals to address increasing demand of these professionals.

b) **Smart Generation, Transmission and Distribution Sector Professionals**: The upcoming Industry 4.0 standards require manpower to understand and implement digitalization. New technologies like Energy Transition, AMI, SCADA, Smart Grid, ADMS (Advanced Distribution Management System) and Smart Metering have to be implemented for AT&C Loss reduction and Efficiency Improvement of distribution sector. Also Machine Learning, Artificial Intelligence, Data Analytics, Data Mining, ERP Software, Generative AI are some of the new technologies which will need trained manpower for modernization of distribution sector from Classical Network to Modern Grid Network to achieve Smart Power Generation, Transmission and Distribution System in the upcoming years.

c) **Certified Lineman**: The demand for certified linemen in the distribution sector is indeed growing, especially as the energy infrastructure continues to expand and modernize. Certified linemen play a crucial role in maintaining and repairing electrical distribution systems, which are vital for power delivery to homes, businesses, and industries.

d) **Certified Trained Manpower**: There is also a need to certify and train the manpower who are working on contract basis in the Power Sector, starting from the linemen to Supervisor in the field of Electrical Safety, Behavior Science, Best Operation & Maintenance Practices, Information Technology in Power sector and overview of Smart Power Distribution System, etc."

PART – II
OBSERVATIONS/RECOMMENDATIONS OF THE COMMITTEE

Budgetary Allocation for 2025-26

1. The Committee note that the Ministry of Power sought Rs. 35,877.88 crores for the financial year 2025-26, but the actual allocation as Gross Budgetary Support is Rs. 21,847 crores which is 60.89% of the demand posted by the Ministry. The most evident difference in demand and actual allocation pertains to the Revamped Distribution Sector Scheme wherein the Ministry has been allocated Rs. 13,579 crores less than the demand. In order to make up for this shortfall, the Ministry has suggested that it may reallocate funds from other programmes where physical targets are not upto the desired level to the critical programmes, as per requirement. It means that one or the other Schemes/Programmes is liable to be impacted due to reallocation of funds within the Ministry and prioritization of one Scheme/Programme over the others. In view of the above, the Committee recommend that all the Schemes/Programmes of the Ministry should be given due priority so that achievement of targets under none of the Schemes/Programmes is hindered due to lack of available funds and the Ministry may seek additional funds as supplementary Grants, if required. The Committee may also be apprised about the reallocation of funds made within the Ministry (scheme/programme wise) and its impact on the concerned Schemes/Programmes.

Utilization of Allocated Funds during the Previous Years

2. The Committee note that the Budgetary Estimates of the Ministry for the financial year 2023-24 was Rs. 20,671.32 crores which was revised to Rs. 17,635 crores and actual utilization was Rs. 16,720.93 crores. It means actual utilization was 80.89% of the Budgetary Estimates and 94.82% of the Revised Estimates. During the financial year 2024-25 as on 31st January, 2025, the Ministry has been able to utilize 85.80% of the Revised Estimates. The major

part of the under-utilization of funds during the financial years 2024-25 pertains to the Schemes/Programmes like, Energy Conservation, Strengthening of Transmission Systems in the States of Arunachal Pradesh and Sikkim, Power System Improvement in North Eastern States, Interest Subsidy to National Electricity Fund, Viability Gap Funding for development of Battery Energy Storage Systems, etc. The Committee observe that Budgetary Allocations of the Ministry have been revised downwards at the stage of Revised Estimates during the last three financial years which may be symptomatic of the specific structural or procedural challenges which have been causing under-utilization of funds. Hence, fund utilization by the Ministry for various Schemes/Programmes needs to be improved. Accordingly, the Committee, recommend that:

i) The Ministry should take effective steps towards increasing its fund absorption capacity as under-utilization of allocated funds may impact on the future budgetary allocations.

ii) The Ministry should introduce a quarterly Fund Utilization and Performance Report and also keep track of the fund usage efficiency of the concerned States with respect to Schemes/Programmes of the Ministry.

<u>Achievement of Scheduled Capacity Addition Targets</u>

3. The Committee note that during the financial year 2023-24, against the scheduled capacity addition targets of 14,700 MW of Thermal Power and 2,880 MW of Hydro Power, the actual achievements were only 5,404 MW and 60 MW respectively. Similarly, during the year 2024-25 (upto 31st January, 2025), against the targets of 15,360 MW of Thermal Power and 1,730 MW of Hydro Power, the actual capacity additions were 1,380 MW and 40 MW respectively. This delay in commissioning of the Thermal and Hydro Capacity would ultimately lead to cost escalation, wherein Subansiri Lower, Parbati-II, Pakal Dul Hydro Projects and Barh, Buxar, Ghatampur, North Karanpaura

Thermal Power Projects, etc. are cases in point. Therefore, the Committee recommend that the Ministry should coordinate with concerned States and Implementing Agencies in order to ensure that the hindrances, if any, are timely catered to, so that scheduled capacity addition targets are achieved in a time bound manner.

Issue of Fly Ash

4. The Committee note that the Ministry of Power has issued an advisory to all the coal/lignite based thermal power producers to provide Ash to the prospective user agencies through a transparent bidding process. It was submitted before the Committee during the evidence that there is a provision to reserve 20% of the Ash for allotment to local industries through separate auction. The Committee feel that there is a need to ensure proper disposal of Fly Ash generated by thermal power plants so that nearby areas do not get polluted. Keeping in view the fact that our Country has already been grappling with the issue of air pollution and there is a need to prioritize environmental well-being, the Committee recommend that the transportation of Ash should be done in body packed vehicles right from the loading end. The Ministry should also ensure strict compliance of the provision of limited auction to reserve 20% of the issuable quantity of Ash for allotment to local industries involved in manufacturing of ash-based products, by all the thermal power producers.

Revamped Distribution Sector Scheme (RDSS)

5. The Committee note that the Revamped Distribution Sector Scheme has been formulated to improve the operational efficiencies and ensure financial sustainability of the Distribution Sector. It aims to reduce the AT&C Losses to 12-15% and the gap between Average Cost of Supply and Average Revenue Realized to zero. The Scheme has an outlay of Rs. 3,03,758 crores with a Gross Budgetary Support of Rs. 97,631 crores from the Government of India over a period of five years from the financial year 2021-22 to 2025-26. The

Committee observe that a total of Rs. 30,065 crores (Revised Estimates) have been allocated for Revamped Distribution Sector Scheme during the first 4 years of this Scheme i.e. from the financial year 2021-22 to 2024-25. Out of this allocation, Rs. 25,664 crores could actually be utilized during these years till 10th February, 2025. Further, the physical achievement with respect to loss reduction works is only 25.3% and against 9,97,680 households sanctioned for electrification; 1,80,070 households could be electrified till 9th February, 2025. The Committee observe that the accumulated losses of Discoms have been continuously increasing as losses were Rs. 5,45,418 crores in financial year 2020-21 which increased to Rs. 5,84,071 crores in 2021-22, Rs. 6,47,913 crores in 2022-23 and Rs. 6,92,269 crores in 2023-24. Further, the Billing and Collection Efficiencies of the Discoms are not very impressive and the gap between Average Cost of Supply and Average Revenue Realized has been fluctuating and is far from zero. It was submitted before the Committee during the evidence that the deadline for implementation of the Revamped Distribution Sector Scheme will be extended by two years. Keeping in view the physical progress in first four years under this Scheme, the Committee recommend that the Ministry should conduct a comprehensive review of this Scheme on the basis of its experience of past four years in order to remove the bottlenecks so that intended targets are achieved atleast by the proposed extended deadline and Distribution Sector becomes operationally efficient at the earliest.

<u>Smart Meters</u>

6. The Committee note that Smart Metering supports Distribution Utilities in improving their financial viability through benefits such as improvement in billing and collection efficiency, automatic energy accounting, improved load forecasting, optimized power purchase costs and renewable energy integration through net metering. The Government has set a target of installing 25 crore Smart Meters in the Country by March 2025, against which

only 2.08 crore Smart Meters have been installed in the Country as on 10th February, 2025. The Committee feel that there is a need to make all out efforts in order to achieve the targets regarding installation of Smart Meters by the extended deadline. It was submitted before the Committee during the evidence that installation of Smart Meters in the Country has picked up pace with present installation of eighty thousand Smart Meters per day and expected installation of one lakh Smart Meters per day. Since, there is going to be massive installation of Smart Meters in the Country during the coming years, the Committee recommend that:

i) **The Ministry should focus on Cyber Security aspect of Smart Meters;**

ii) **Cases of complaints regarding faulty meters should be addressed on priority with installation of check meters in respect of all the complaints to verify the readings of the faulty Smart Meter; and**

iii) **Independent Third Party Verification of installed Smart Meters and Awareness Campaigns may also be initiated in order to boost confidence of the Consumers.**

<u>Strengthening of Power System</u>

7. The Committee note that out of 446 elements in six States under 'North Eastern Region Power System Improvement Project', 443 elements are completed and remaining 3 elements are targeted to be completed by June 2025. Similarly, out of 294 elements under 'Comprehensive Scheme for Strengthening of Transmission and Distribution System in Arunachal Pradesh and Sikkim', 182 elements are completed and remaining 112 elements are targeted to be completed by March 2025. The Committee observe that it has been more than 10 years since these two Projects got the approval of the Government and their completion is still due. The reasons cited by the Ministry for delay in completion of these Projects are the typical issues like, heavy rain-fall and lack of connectivity in North-Eastern Region, delay in land

acquisition, delay in forest clearance, Right of Way and compensation issues, land sliding, poor financial condition of contractors, etc. The Committee feel that difficult terrain, heavy rainfall, lack of connectivity, etc. in the North-Eastern Region are the issues that are obvious and very much known from the start. Due to these very reasons, this Region remained low on development for so long, therefore there is a need to stop looking at these aspects as justifications for time and cost over-runs and instead efforts should be made in finding the solutions. In view of the above, the Committee recommend that the Ministry and Power Grid Corporation of India Limited should expedite and focus on completion of 'Comprehensive Scheme for Strengthening of Transmission and Distribution System in Arunachal Pradesh and Sikkim' and 'North Eastern Region Power System Improvement Project' by March and June, 2025 respectively on priority basis so that these Projects are not delayed further.

8. The Committee observe that the issues regarding compensation for Right of Way, delay in Land Acquisition and Forest Clearances, etc. are the constant contributors to the cost over-runs and delays in completion of Power Projects across the Country. These issues deserve some serious consideration in order to create a balance between infrastructure development and impact on communities and environment. The Committee therefore, recommend that the Ministry should consult the States, concerned Departments/Agencies and other Stakeholders so as to reach at an amicable solution so that cost and time over-runs may be avoided without compromising on the environment and interests of the People.

<u>Viability Gap Funding (VGF)</u>

9. The Committee note that the Government has approved the Viability Gap Funding for development of Battery Energy Storage Systems (BESS). The Scheme had set a target of adding at least 4,000 MWh of BESS by the financial

year 2027-28 by providing a VGF of Rs. 3,760 crores in the form of capital subsidy, however due to decline in prices of BESS in the recent past, enhanced capacity of 13,200 MWh is envisaged under the VGF Scheme. During the financial year 2024-25, an amount of Rs. 96 crores was allocated for this Scheme which got reduced to Rs. 46 crores at the time of Revised Estimates and the actual expenditure is zero till now. For the financial year 2025-26, an amount of Rs. 200 crores has been allocated. This Scheme is expected to not only enhance the integration of renewable energy into the electricity grid but also minimize wastage while optimizing the utilization of transmission networks, consequently reducing the need for costly infrastructure upgrades. Acknowledging the importance of Battery Energy Storage Systems in stabilization of the Grid, the Committee recommend that the Ministry should take every possible step to ensure that the implementation of this Scheme remains on track and all the stipulated targets are achieved as per the prescribed timeline.

<u>Development of Power Sector in North-Eastern Region</u>

10. The Committee note that the Government of India has been helping the North-Eastern States through its various Schemes including Deen Dayal Upadhyaya Gram Jyoti Yojana, Saubhagya and Revamped Distribution Sector Scheme. During the last three financial years, Rs. 2,497.03 crores have been allocated for North-Eastern Region under Revamped Distribution Sector Scheme. Further, the Government of India has approved the Scheme for providing Central Financial Assistance to the State Governments of North Eastern Region towards their equity participation for development of Hydro Electric Projects in the Region through joint ventures between concerned State Governments and Central Public Sector Undertakings with an outlay of Rs. 4,136 crores for cumulative hydro capacity of about 15000 MW. Additionally, Funds have also been allocated by the Government for Flood Moderation with respect to Dibang Multipurpose Project and Downstream

Protection works of Subansiri Lower Project in Arunachal Pradesh. However, it has been submitted before the Committee that no project developers in North Eastern Region has availed the grant under the Scheme of Budgetary Support towards Enabling Infrastructure, such as Roads/Bridges so far, which in itself is quite ironical given the condition of such infrastructure in the Region. Nonetheless, the Committee recommend that the Ministry should continue to ensure that the mandated atleast 10% of its Gross Budgetary Support is not only earmarked for development of Power Sector in the North-Eastern Region, but the same is actually utilized for the intended purpose.

Central Electricity Authority (CEA)

11. The Committee note that the fundamental key to effective functioning of the Central Electricity Authority is the availability of comprehensive and qualitative statistics from all the stakeholders which would enhance the planning and operational interventions of CEA for coordinated development of the Power Sector. It is understandable that the subject 'Electricity' falls under the Concurrent List and Generation being the delicensed activity have resulted into innumerable stakeholders in this Sector. However, the Committee feel that delay in availability of data in the today's technologically advanced time and age is incomprehensible. The Committee, therefore recommend that a dedicated online portal may be created at the earliest in order to ensure seamless submission, validation and monitoring of the data by all the stakeholders in order to ensure real-time accessibility of desired statistics.

National Power Training Institute (NPTI)

12. The Committee note that the Budgetary Estimates for National Power Training Institute have been substantially decreased at the time of Revised Estimates, barring the financial year 2023-24. The allocations were reduced by about 68.47% during the financial year 2020-21, about 77% during 2021-22, about 40% during 2022-23 and about 50% during 2024-25. The

Committee observe that the NPTI has not been able to fully utilize even the decreased allocations during these financial years. The Government of India provide funds to NPTI for meeting the requirement of its pension liabilities and for creation/upgradation of infrastructure in its Institutes spread across the Country. Finding it strange that funds remain un-spent by NPTI which needs to act as a resource centre for Training and Capacity Building in highly dynamic Power Sector, the Committee recommend that the NPTI should ensure exhaustive utilization of the allocated funds for creation and upgradation of its training facilities and infrastructure in order to get the required workforce trained, equipped and prepared to steer the Power Sector forward.

New Delhi
11th March, 2025
20 Phalguna, 1946 (Saka)

Shrirang Appa Barne
Chairperson,
Standing Committee on Energy

ANNEXURE – I

STANDING COMMITTEE ON ENERGY

MINUTES OF EIGHTH SITTING OF THE STANDING COMMITTEE ON ENERGY (2024-25) HELD ON 24th FEBRUARY, 2025 IN COMMITTEE ROOM-D, PARLIAMENT HOUSE ANNEXE, NEW DELHI

The Committee sat from 1130 hours to 1400 hours

MEMBERS - LOK SABHA

Shri Shrirang Appa Barne – Chairperson

2. Shri Shyamkumar Daulat Barve
3. Shri Devusinh Chauhan
4. Shri Shahu Shahaji Chhatrapati
5. Captain Brijesh Chowta
6. Dr. Shivaji Bandappa Kalge
7. Dr. Kirsan Namdeo
8. Shri Dulu Mahato
9. Shri Ramprit Mandal
10. Shri Jagdambika Pal
11. Shri Kunduru Raghuveer
12. Smt. Shambhavi
13. Shri Abhay Kumar Sinha

MEMBERS - RAJYA SABHA

14. Shri Gulam Ali
15. Shri Ajit Kumar Bhuyan
16. Shri Javed Ali Khan
17. Shri Harsh Mahajan

SECRETARIAT

1.	Shri Ramkumar Suryanarayanan	Joint Secretary
2.	Shri Kulmohan Singh Arora	Director
3.	Shri Ajitesh Singh	Deputy Secretary
4.	Ms. Deepika	Under Secretary

WITNESSES		
MINISTRY OF POWER		
1	Shri Pankaj Agarwal	Secretary
2	Shri Mahabir Prasad	Joint Secretary & Financial Advisor
3	Dr. D. Sai Baba	Joint Secretary
4	Shri Piyush Singh	Joint Secretary
5	Shri Mohammad Afzal	Joint Secretary
6	Shri Shashank Misra	Joint Secretary
7	Shri Hemant Kumar Pandey	Chief Engineer
8	Shri Binod Kumar Agrawal	Chief Controller of Accounts
CENTRAL ELECTRICITY AUTHORITY		
9	Shri Ghanshyam Prasad	Chairperson
PSUs/AUTONOMOUS BODIES/STATUTORY BODIES		
10	Shri R. K. Tyagi	CMD, PGCIL
11	Shri Raj Kumar Chaudhary	CMD, NHPC and SJVN Limited
12	Shri S. R. Narasimhan	CMD, Grid Controller of India Limited
13	Shri S. Suresh Kumar	Chairman, DVC
14	Shri Manoj Tripathi	Chairman, BBMB
15	Shri B. A. Sawale	Director General, CPRI
16	Dr. Tripta Thakur	Director General, NPTI
17	Shri Bhupender Gupta	Director, THDC India Limited
18	Shri Harsh Baweja	Director, REC Limited
19	Shri Manoj Sharma	Director, PFC Limited
20	Shri K. Shanmugha Sundaram Kothandapani	Director, NTPC Limited
21	Shri Samiran Goswami	Executive Director, NEEPCO

2. At the outset, the Hon'ble Chairperson welcomed the Members of the Committee and representatives of the Ministry of Power and concerned CPSUs, Autonomous Bodies and Statutory Bodies to the Sitting and informed that the Sitting had been called for evidence in connection with examination of the Demands for Grants (2025-26) of the Ministry. The Hon'ble Chairperson also apprised them about the provisions of Directions 55(1) and 58 of the Directions by the Hon'ble Speaker.

3. During the discussion, a power-point presentation was made on the subject which, *inter-alia,* covered major achievements of the Ministry of Power; Growth of Indian Power Transmission System; Impact of Energy Efficiency

Interventions; Budgetary Allocation and Actual Expenditure; Budget (2025-26); Details of CAPEX Targets of CPSEs of the Ministry of Power from Financial Year 2020-21 to Financial Year 2025-26; Revamped Distribution Sector Scheme; Transmission Schemes; New Schemes operational from Financial Year 2025-26; etc.

4. The Committee, *inter-alia,* deliberated upon the following points with representatives of the Ministry of Power and concerned CPSUs, Autonomous Bodies and Statutory Bodies:

i) Likely impact on key Schemes/Programmes as the Ministry of Power projected a requirement of Rs. 35,877.88 crore in Financial Year 2025-26, but was sanctioned only Rs. 21,847 crore;

ii) Steps taken to ensure efficient utilisation of the budget considering the past instances of under-spending in certain areas;

iii) Need for the Ministry to improve its absorptive capacity in spending budgeted funds and achieve the stipulated targets;

iv) Issues related to fund utilisation and project execution under the Revamped Distribution Sector Scheme;

v) Issues related to Smart Metering;

vi) Issues related to Transmission and AT&C Losses;

vii) Issues related to deteriorating financial condition of Discoms;

viii) Issues related to Household Electrification;

ix) Issues related to supply of 24x7 reliable power supply for all;

x) Expected timeline for commissioning of 13200 MWh of Storage Capacity under the Scheme 'Viability Gap Funding' for the development of Battery Energy Storage Systems;

xi) Policy interventions and financial assistance provided by the Government of India for Pumped Storage Projects and Large Hydro Projects;

xii) Issues related to budget allocation for the projects in the North-Eastern Region;

xiii) Status of Subansiri Hydro Project, Pakal Dul Hydro Electric Project. Dibang Valley Project and Buxar Thermal Power Project and reasons for delays in their commissioning;

xiv) Issues related to evacuation and transmission of power;

xv) Present Status of North Eastern Region Power System Improvement Project and Comprehensive Scheme for strengthening of Transmission & Distribution in Arunachal Pradesh and Sikkim;

xvi) Need to implement a third-party monitoring system for large-scale transmission projects to prevent delays and cost overruns;

xvii) Need to introduce drone-based inspections of transmission line to improve efficiency in monitoring and maintenance;

xviii) Issues related to Power System Development Fund;

xix) Issues related to Cyber Security in the Power Sector;

xx) Issues related to Environmental Impact Assessment and related Relief and Rehabilitation Measures;

xxi) Need for compliance of emission norms by all Thermal Power Plants;

xxii) Issues related to Fly Ash;

xxiii) Challenges related to financing of new infrastructure in the Power Sector;

xxiv) Issues related to Energy Efficiency Financing Facility – ADEETIE;

xxv) Physical and financial performance of Central Electricity Authority, Bureau of Energy Efficiency, National Power Training Institute and Central Power Research Institute.

5. The Members also sought clarifications on various other issues relating to the subject and representatives of the Ministry and concerned Organizations responded to the same. The Committee directed the representatives to furnish written replies to all those queries which could not be fully responded to within 5 days of the Sitting.

The Committee then adjourned.

The verbatim proceedings of the sitting have been kept for record.

ANNEXURE – II

STANDING COMMITTEE ON ENERGY

MINUTES OF TENTH SITTING OF THE STANDING COMMITTEE ON ENERGY (2024-25) HELD ON 11TH MARCH, 2025 IN COMMITTEE ROOM-3, PARLIAMENT HOUSE ANNEXE EXTENSION, NEW DELHI

The Committee sat from 1500 hours to 1530 hours

MEMBERS - LOK SABHA

Shri Shrirang Appa Barne - Chairperson

2. Shri Shyamkumar Daulat Barve
3. Shri Devusinh Chauhan
4. Captain Brijesh Chowta
5. Shri Malaiyarasan D.
6. Shri Chandra Prakash Joshi
7. Dr. Shivaji Bandappa Kalge
8. Dr. Kirsan Namdeo
9. Shri Nilesh Dnyandev Lanke
10. Shri Dulu Mahato
11. Shri Ramprit Mandal
12. Smt. Bijuli Kalita Medhi
13. Shri Jagdambika Pal
14. Smt. Shambhavi
15. Shri Chandubhai Chhaganbhai Shihora
16. Dr. Shrikant Eknath Shinde
17. Shri Abhay Kumar Sinha

MEMBERS - RAJYA SABHA

18. Shri Gulam Ali
19. Dr. Laxmikant Bajpayee
20. Shri Ajit Kumar Bhuyan
21. Shri R. Dharmar
22. Shri N.R. Elango
23. Shri Javed Ali Khan
24. Shri Harsh Mahajan
25. Smt. Mamata Mohanta

SECRETARIAT

1.	Shri Ramkumar Suryanarayanan	Joint Secretary
2.	Shri Kulmohan Singh Arora	Director
3.	Shri Ajitesh Singh	Deputy Secretary
4.	Ms. Deepika	Under Secretary

2. At the outset, the Chairperson welcomed the Members of the Committee and apprised them about the agenda of the sitting. The Committee then took up for consideration and adoption the following draft Reports:

(i) Report on Action-taken by the Government on Observations/ Recommendations contained in the 41st Report (17th Lok Sabha) on the subject 'Bio-Energy and Waste to Energy-Recovery of Energy from Urban, Industrial and Agricultural Wastes/Residues and Role of Urban Local Bodies in Energy Management'.

(ii) Report on Demands for Grants (2025-26) of the Ministry of Power.

(iii) Report on Demands for Grants (2025-26) of the Ministry of New and Renewable Energy.

3. After discussing the contents of the Reports in detail, the Committee adopted the abovementioned three draft Reports without any amendment/ modification.

4. The Committee authorized the Chairperson to finalize the above-mentioned Reports and present the same to both the Houses of the Parliament during the current session.

The Committee then adjourned.

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