2

STANDING COMMITTEE ON ENERGY

(2019-20)

SEVENTEENTH LOK SABHA

MINISTRY OF POWER

DEMANDS FOR GRANTS
2019-20

SECOND REPORT

सत्यमेव जयते

LOK SABHA SECRETARIAT
NEW DELHI

December, 2019/ Agrahayana, 1941 (Saka)

SECOND REPORT

STANDING COMMITTEE ON ENERGY
(2019-20)

(SEVENTEENTH LOK SABHA)

MINISTRY OF POWER

DEMANDS FOR GRANTS
(2019-20)

Presented to Lok Sabha on 06.12.2019

Laid in Rajya Sabha on 06.12.2019

LOK SABHA SECRETARIAT
NEW DELHI

December, 2019/Agrahayana, 1941 (Saka)

COE NO. 309

Price: **Rs.....**

Published under Rule 382 of the Rules of Procedure and Conduct of Business in Lok Sabha (Twelfth Edition) and Printed by

CONTENTS

Page No.

COMPOSITION OF THE STANDING COMMITTEE ON ENERGY (2019-20)

Lok Sabha

Shri Rajiv Ranjan Singh *alias* Lalan Singh - Chairperson

2. Smt. Sajda Ahmed
3. Shri Gurjeet Singh Aujla
4. Shri Chandra Sekhar Bellana
5. Shri Thomas Chazhikadan
6. Dr. A. Chellakumar
7. Shri Harish Dwivedi
8. Shri S. Gnanathiraviam
9. Shri Sanjay Haribhau Jadhav
10. Shri Kishan Kapoor
11. Km. Shobha Karandlaje
12. Shri Ramesh Chander Kaushik
13. Shri Ashok Mahadeorao Nete
14. Shri Praveen Kumar Nishad
15. Shri Parbatbhai Savabhai Patel
16. Smt. Anupriya Patel
17. Shri Jai Prakash
18. Shri N. Uttam Kumar Reddy
19. Shri Naba Kumar Sarania
20. Shri Shivkumar Chanabasappa Udasi
21. Shri Akhilesh Yadav

Rajya Sabha

22. Shri T. K. S. Elangovan
23. *Shri Vijay Goel

24. Shri B. K. Hariprasad
25. Shri Javed Ali Khan
26. Dr. Prabhakar Kore
27. Shri S. Muthukaruppan
28. Dr. C.P. Thakur
29. Smt. Viplove Thakur
30. Vacant
31. vacant

Secretariat

1.	Shri R.C. Tiwari	Joint Secretary
2.	Shri N.K. Pandey	Director
3	Shri Manish Kumar	Assistant Executive Officer

---

* *Resigned from the membership of the Committee w.e.f. 21.11.2019*

INTRODUCTION

I, the Chairperson, Standing Committee on Energy having been authorized by the Committee to present the Report on their behalf, present this Second Report on Demands for Grants of the Ministry of Power for the year 2019-20.

2. The Committee took oral evidence of the representatives of the Ministry of Power on 25th October, 2019. The Committee wish to express their thanks to the representatives of the Ministry 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 3rd December, 2019.

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
4th December, 2019
13 Agrahayana 1941 (Saka)

RAJIV RANJAN SINGH alias LALAN SINGH
Chairman,
Standing Committee on Energy

REPORT

PART-I

NARRATION ANALYSIS

I. INTRODUCTORY

1.1 The Country has come a long way as far as development of electricity sector is concerned. Enough generation capacities have been developed to fully cater the electricity demands of the country. Today all the villages of the Country are electrified. Not only this but almost all the households in the country have also been provided electricity connections. The Country has made tremendous progress in renewable energy too and is on the way to become a leading nation in this field. It is also a matter of pride that our nation has one of the largest operational synchronous grid in the world having more than 360 GW of installed power generation capacity. Though the Country has made praiseworthy progress in electricity sector, there are various issues – some are continuing since long, whereas some have cropped up due to recent developments in the country, which need attention and effective remedial actions so that this sector can be made resilient and robust. Poor state of Distribution Sector, High AT&C losses, affordability of electricity, Stressed/Non-performing Assets (NPAs) in power sector, need for growth of power sector in a balanced manner, assimilation of intermittent renewable energy in the system, need for Research & Development in Power Sector and technological up-gradation of power system are some of the challenges that electricity sector is presently facing. To address these issues another round of reform is the need of the hour.

1.2 The Ministry of Power is primarily responsible for the development of electrical energy in the country. The Ministry's responsibility *inter-alia* includes perspective planning, policy formulation, processing of projects for investment decision, monitoring of the implementation of power projects, training and manpower development and the administration and enactment of legislation in regard to thermal, hydro power generation, transmission and distribution.

1.3 The main items of work dealt with by the Ministry of Power are as given below:

- 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);
- All matters relating to hydro-electric power (except small/mini/micro hydel projects of and below 25 MW capacity), thermal power and transmission & distribution system network;
- Research, development and technical assistance relating to hydro-electric and thermal power, transmission system network and distribution systems in the States/UTs;
- 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 Reorganisation Act, 1966 (31 of 1966);
- All matters relating to the Central Electricity Authority, Appellate Tribunal for Electricity and Central Electricity Regulatory Commission;
- Rural Electrification;

- Power schemes and issues relating to power supply/development schemes/programmes/decentralized and distributed generation in the States and Union Territories;
- Matters relating to the following Undertakings/Organizations:
  (a) Damodar Valley Corporation (DVC);
  (b) Bhakra Beas Management Board (except matters relating to irrigation);
  (c) NTPC Limited;
  (d) NHPC Limited;
  (e) Rural Electrification Corporation Limited (REC);
  (f) North Eastern Electric Power Corporation Limited (NEEPCO);
  (g) Power Grid Corporation of India Limited (PGCIL);
  (h) Power Finance Corporation Limited (PFC);
  (i) THDC India Limited;
  (j) SJVN Limited;
  (k) Central Power Research Institute (CPRI);
  (l) National Power Training Institute (NPTI); and
  (m) Bureau of Energy Efficiency (BEE).
- All matters concerning energy conservation and energy efficiency pertaining to the Power Sector.

1.4 In all technical and economic matters, the Ministry of Power is assisted by the Central Electricity Authority (CEA). While the Authority (CEA) is a Statutory Body constituted under section 3 of the repealed Electricity (Supply) Act, 1948 and continued under section 70 of the Electricity Act, 2003, where similar provisions exist, the office of the CEA is an "Attached Office" of the Ministry of Power. The CEA is responsible for technical coordination and supervision of programmes and is entrusted with a number of statutory functions. The CEA is headed by a Chairperson, who is also ex-officio Secretary

to the Government of India, and comprises six full time Members of the rank of Ex-officio Additional Secretaries to the Government of India. They are designated as Member (Thermal), Member (Hydro), Member (Economic & Commercial), Member (Power System), Member (Planning) and Member (Grid Operation and Distribution). 14 subordinate offices are functioning under the control of the Central Electricity Authority. The Ministry of Power has a monitoring system for capacity addition programmes for timely execution of the cleared projects. The monitoring mechanism operates at 3 broad levels, *viz.* by the Central Electricity Authority, by the Ministry of Power and through the Power Project Monitoring Panel (PPMP).

1.5 The National Electricity Policy, which has been evolved in consultation with and taking into account the views of the State Governments, the Central Electricity Authority (CEA), the Central Electricity Regulatory Commission (CERC) and other stakeholders, aims at laying guidelines for accelerated development of the power sector, providing supply of electricity to all areas and protecting the interests of consumers and other stakeholders, keeping in view the availability of energy resources, technology available to exploit these resources, economics of generation using different resources, and energy security issues. The National Electricity Policy (2005) aimed at achieving the following objectives:

- Access to Electricity - Available for all households in the next five years.
- Availability of Power - Demand to be fully met by 2012. Energy and peaking shortages to be overcome and adequate spinning reserve to be available.
- Supply of Reliable and Quality Power of specified standards in an efficient manner and at reasonable rates.
- Per capita availability of electricity to be increased to over 1000 units by 2012.

- Minimum lifeline consumption of 1 unit/household/day as a merit good by the year 2012.
- Financial Turnaround and Commercial Viability of Electricity Sector.
- Protection of consumers' interests.

II. ANALYSIS OF DEMANDS FOR GRANTS (2018-19)

2.1 The Minister of State for Power laid on the Table of the Lok Sabha, the detailed Demands for Grants (2019-20) for the Ministry of Power on 12th July, 2019. The Demands show a budgetary provision of GBS of Rs. 15,874.82 crore. The Central Plan Outlay, including IEBR, i.e. Rs. 42,407.41 crore, however, stands at Rs. 58,282.23 crore. The Head-wise Demands for Grants of the Ministry are given as per **Annexure-I**. The Programmes and Schemes of the Ministry within the financial provisions made under the Demands are briefly as under:

1. Secretariat: Provision is made for expenditure on establishment matters of the Secretariat of the Ministry of Power.

2.01. Central Electricity Authority: The Central Electricity Authority (CEA) as a statutory organization is responsible for overall power sector planning, coordination, according concurrence to hydro-electric schemes, promoting and assisting the timely completion of projects, specifying technical standards and safety requirements, Grid Standards and conditions for installation of meters applicable to the Power Sector of the country.

2.02. Setting up of JERC for UTs and Goa: The Central Government has set up a Joint Electricity Regulatory Commission (JERC) for Goa and all Union Territories except Delhi. Expenditure of the Joint Commission is borne by the Central Government and the Government of Goa in the ratio of 6:1.

2.03. Appellate Tribunal for Electricity: Under the provisions of Electricity Act, 2003, the Central Government has set up the Appellate Tribunal for Electricity. It hears appeals against the orders of the adjudicating officer or the Appropriate Commissions under the Electricity Act, 2003. Under the provisions of the Petroleum

and Natural Gas Regulatory Board Act, 2006, APTEL is the Appellate Tribunal for the purpose of that Act.

2.04. Central Electricity Regulatory Commission (CERC) Fund: CERC is a statutory body constituted under the provision of the erstwhile Electricity Regulatory Commissions Act, 1998 and continued under Electricity Act, 2003 (which has since repealed inter alia the ERC Act, 1998). The main functions of the CERC are to regulate the tariff of generating companies owned or controlled by the Central Government, to regulate the tariff of generating companies other than those owned or controlled by the Central Government, if such generating companies enter into or otherwise have a composite scheme for generation and sale of electricity in more than one State, to regulate the inter-State transmission of energy including tariff of the transmission utilities, to grant licences for inter-State transmission and trading and to advise the Central Government in formulation of National Electricity Policy and Tariff Policy.

3.01. Energy Conservation: The funds would be utilized for (i) carrying out awareness creation on Energy Conservation through print, electronic and other media for general public, (ii) Continuation of EC awards and painting competition on Energy Conservation, (iii) implementation of the National Mission for Enhanced Energy Efficiency (NMEEE) and (iv) the upscaling of the efforts to create and sustain market for energy efficiency to unlock investments. (v) Shields and certificates are given by MoP to generating stations, transmission and distribution utilities and rural distribution franchise for recognising meritorious performance in operation, project management and environmental protection.

4. Deen Dayal Upadhyaya Gram Jyoti Yojna: Deendayal Upadhyaya Gram Jyoti Yojna (DDUGJY)has the following objectives : (a) to separate agriculture and non-agriculture feeders to facilitate Discoms in the judicious rostering of supply to agricultural & non-agricultural consumers (b) strengthen and augment sub-transmission & Distribution infrastructure in rural areas and (c) Rural electrification.

The scope of works covered under the scheme are Feeder separation, creation of new sub-stations, provision of micro-grid and off-grid distribution network, HT/LT lines, augmentation of sub-stations and metering at all levels. Under the scheme, Govt. of India is providing financial support in the form of grants to the DisComs for implementation of the scheme. All DisComs including Private Sector DisComs are eligible for availing financial support under the scheme. The erstwhile Rajiv Gandhi Gramin Vidutikaran Yojna (RGGVY) has been subsumed in DDUGJY as its Rural Electrification component.

6. Integrated Power Development Scheme: The objective of the scheme is 24x7 power supply for consumers, reduction of AT&C losses and providing access to all households. The scheme has three major components namely improvement of sub-transmisison and distribution system in urban areas, metering & IT enablement in distribution sector under ongoing Restructured-Accelarated Power Development Reform Programme (R-APDRP) scheme, which has been subsumed under Integrated Power Development Scheme (IPDS). R-APDRP has two major components: Part-A includes projects for establishment of information technology-based energy accounting and audit system leading to finalization of verifiable base-line AT&C loss levels in the project areas; Part-B envisages distribution network strengthening investments leading to reduction in loss level. The scheme has both Grant and loan components.

6.01. Transfer to Central Road and Infrastructure Fund (CRIF): The amount under the scheme is met from Central Road and Infrastructure Fund (CRIF).

6.02. IPDS-Grant: Grant is given to the utilities through the Nodal Agency for carrying out the activities under the Scheme within a specified time frame.

6.03. IPDS-Loans: Loan has been given to the utilities for carrying out the activities through the Nodal Agency, which will be converted into grant after successful completion of the programme.

6.07. Scheme for Smart Metering: To accelerate the smart metering, a scheme with GoI funding for supply and installation of smart meter on PAN india basis.

7.01. Smart Grids: The scheme envisages setting up of an institutional mechanism by launching 'National Smart Grid Mission' which would serve the need of an electrical grid with automation, communication and IT systems that can monitor power flows from points of generation to points of consumption and ensure control of power flow or curtailment of loads matching generation on real time basis.

7.02. Green Energy Corridors: The scheme is proposed for maximization of renewable energy generation and integration with the main grid without compromising on the security and stability of power system.

7.03. Interest Subsidy to National Electricity Fund: The National Electricity Fund (NEF) is being set up to provide interest subsidy on loans to be disbursed to the Distribution Companies (DISCOMS) both in the Public and Private Sector, to improve the distribution network for areas not covered by RGGVY and R-APDRP scheme (since subsumed in DDUGJY and IPDS respectively) Project areas.

7.05. 220 kV Transmission line from Srinagar to Leh via Kargil: The provision is for construction of 220kV Transmission System from Alusteng (Srinagar) to Leh (via Drass, Kargil & Khalsti 220/66 PGCIL substations) and 66 PGCIL interconnection system for Drass, Kargil, Khalsti and Leh sub-stations in Jammu & Kashmir (J&K).

7.06. Power System Improvement in North Eastern States excluding Arunachal Pradesh and Sikkim (Program Component): The project is for Power System Improvement in six NER states viz. Assam, Manipur, Meghalaya, Mizoram, Tripura and Nagaland. It is funded by the World Bank. Intra-State Transmission & Distribution projects for Sikkim & Arunachal Pradesh have been segregated for implementation through budgetary support from Government of India in view of these States having sensitive borders.

7.08. Strengthening of Transmission System in the States of Arunachal Pradesh and Sikkim: A comprehensive scheme for strengthening of transmission, sub-transmission and distribution system in the entire NER including Sikkim has been conceptualized.

8. Power System Development Fund: The scheme envisages (a) strengthening of existing distribution and transmission infrastructure by part-funding through Grants.(Non-Gas component) (b) Provision for subsidy to DISCOMS purchasing electiricty from stranded Gas based Power Plants (Gas component).

9.01. Central Power Research Institute: Central Power Research Institute, Bengaluru serves as a National Laboratory for applied research in the field of electrical power and also functions as an independent authority for testing, evaluation and certification of electrical equipment and components.

9.02. National Power Training Institute: National Power Training Institute is engaged in imparting training in various aspects of power sector including operation and maintenance of power stations.

10. Conservation and Energy Efficiency: Funds are provided to Bureau of Energy Efficiency (BEE) for implementation of various energy efficiency initiatives in the areas of household lighting, commercial buildings, Standards & Labeling appliances, Demand Side Management in Agriculture or Municipalities, SMEs and large industries including the initiation of the process for development of Energy Consumption norms for industrial sub-sectors, capacity building of SDAs, DISCOMS etc.

11.01. National Hydro Electric Power Corporation Ltd: NHPC was set up in 1975 under Companies Act, 1956, with a view to securing speedy, efficient and economical execution and operation of Hydro-Electric projects in the Central Sector.

NHPC is a schedule A (Mini Ratna) Enterprise of the Government of India. The Capital Outlay is for meeting in part the need for funds for Chutak HEP/ Nimoo Bazjo.

11.02. Tehri Development Corporation (THDC): THDC India Limited is a Joint Venture of Govt. of India and Govt. of Uttar Pradesh. The equity is shared between GoI and GoUP in the ratio of 3:1. The company was incorporated in July, 1988 to develop, operate and maintain the 2400 MW Tehri Hydro Power Complex and other hydro projects in the Bhagirathi valley. The Capital outlay is for meeting in part the expenditure on VishnuGadh Pipal Koti HEP.

11.03. North Eastern Electric Power Corporation (NEEPCO): The North Eastern Electric Power Corporation Limited (NEEPCO), a Schedule A Mini Ratna company under Ministry of Power, set up on 2nd April, 1976, carries the objective of developing the power potential in India and abroad with special emphasis on the NE Region of the country through planned development and commissioning of power projects, which in turn would promote the overall development of the country and NE region in particular. The capital outlay is for meeting part of the expenditure on Kameng HEP as per the requirement.

11.04. Central Assistance for Pakul Dul HEP under J and K PMDP 2015 as grant to Chenab Valley Power Projects Private Limited (CVPPPL): It is part of Prime Minister development package (2015), the asistance is for the Pakul Dul HEP implemented through joint venture with Chenab Valley Power project Pvt limited.

11.05. GoI fully serviced bond issue expenditure and interest (PFC bonds): The allocation is required for expenses and on the issue of Bonds, interest payable on infrastructure bonds raise by Power Finance Corporation (PFC).

11.06. GoI fully serviced bond issue expenditure and interest (REC Bonds): Interest payment on account of EBR of Rs 4000 cr raised during FY 2017-18 and Rs 15000 crore to raised during FY 2018-19 for DDUGJY & Saubhagaya (Rural).

11.07. Reimbursement of Claim for any expenditure already incurred by NTPC on Lohari Nagpala Hydro Power: The scheme is for distribution of award in respect of Lohari Nag Pala Hydro Power Project.

12. Acquisition of Coal bearing areas for NTPC: The allocation is budget neutral as met through recoveries from NTPC on acquisition of Coal bearing areas for NTPC.

13. Advance ultra super critical plant in Sipat, Chattisgarh: Setting up of technology demonstration project at Sipat, Chattisgarh.

14. Payment to Law firm P and A Law associates in KOWEPO case: Payment to Law firm under the India Korea CEPA and India Korea BIT for defending case and dispute on behalf of GoI.

15. Payment to SDMC- Badarpur Thermal Power Station: Payment to South Delhi Municipal Corporation on account of Land Lease in respect of Badarpur Thermal Power Station.

16. Support for cost of enabling infrastructure i.e Roads/ Bridge etc: Allocation for developing enabling infrastructure such as Roads, Bridges etc at site of Hydro Project.

17. Support for flood moderation storage- Hydro electric projects: Allocation for support for Flood moderation storage at Hydro electric projects.

III. ANNUAL PLAN OUTLAY

3.1 During the Regular Budget of 2019-20, the Ministry of Power sought an outlay Rs. 32,001.11 crore (GBS component). However, the Ministry of Finance has approved an allocation of Rs. 15,874.82 crore only. The total outlay for the year 2019-20 is Rs. 58,282.23 crore comprising IEBR of Rs. 42,407.41 crore and GBS of Rs. 15,874.82 crore. Details of the GBS components as sought by the Ministry of Power are as given as **Annexure-II**.

3.2 The Ministry have informed that apart from BE 2019-20, the Ministry of Finance has allowed for raising Extra Budgetary Resources to the tune of Rs. 9,000 crore specifically for DDUGJY and Saubhagaya Scheme of the Ministry of Power.

3.3 The Ministry of Power have provided the following explanation of financial requirement under major Schemes in Budgetary Estimate 2019-20:

(i) **Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY):** The projected requirement during the Interim Budget was Rs. 14,000 crore for Deen Dayal Upadhyay Gram Jyoti Yojana wherein only Rs. 4066 crore is given in regular Budget 2019-20. Out of this, Rs. 7,000 crore is given by M/o Finance by way of raising EBR.

(ii) **Integrated Power Development Scheme (IPDS)**: Budget requirement under R-APDRP for FY 2019-20 is Rs 1,100 crore and Rs. 5,050 crore under IPDS grant i.e. total budget requirement under IPDS for FY 2019-20 is Rs. 6,150 crore. Out of the total requirement only Rs. 5,280.45 crore is provided in the Regular Budget. This amount is needed to ensure closure of R-APDRP Part A IT, SCADA and Part B projects including Grant in aid of Rs 100 crore. As on date claims worth

Rs. 2,880 crore has already been processed/ are under process. Considering the progress of IPDS project. Utilities may need these funds for timely completion of IPDS projects.

(iii) **Saubhagaya Scheme:** The required additional amount of Rs. 2,000 crore is due to spillover works under the Scheme Saubhagaya- Rural

3.4 The details of Internal & Extra Budgetary Resources (I&EBR) for the year 2019-20 are given below:

S.No	Name of PSU	(Rs in crore)
1	National Thermal Power Corporation Limited	20,000.00
2	National Hydro Electric Power Corporation Limited	3,806.00
3	Damodar Valley Corporation Limited	1,835.26
4	North Eastern Electric Power Corporation Limited	925.79
5	Satluj Jal Vidyut Nigam Limited	1,200.00
6	Tehri Hydro Development Corporation Limited	900.00
7	Power Grid Corporation of India Limited	15,000.00
	Total	**43,667.05**

3.5 The Committee were informed that the internal accruals out of operations (of CPSUs) and borrowings (both domestic and foreign) constitute IEBR. The capex plan of CPSUs (for generation/transmission projects) is funded substantially through I&EBR. In fact, the budgetary support (to capex plan) is provided only to Hydel PSUs (NHPC, THDC and NEEPCO), that too, on a limited scale. The expenditure under IEBR is not routed through government budget/demand for grant. It is managed by the Board of the respective PSUs.

3.6 It was further informed that the GBS, on the other hand, is the gross budgetary support/demand for grant provided from out of the Consolidated Fund of India for implementation of various schemes of the Ministry, forming part of the Five Year

Plan/Annual Plans. The expenditure under GBS is routed through the Ministry's budget. Further, Extra Budgetary Resources (EBR) is the borrowing raised by the Government entities for the Government Scheme

3.7 During the Regular Budget of 2018-19, the Ministry of Power had sought an outlay Rs. 36,843.32 crore (GBS component). However, the Ministry of Finance had approved an allocation of Rs. 15,046.92 crore only. At the time of Revised Estimate (RE) the allocation was slightly increased to Rs. 15,625.19 crore due to requirement of funds under NERSIP and Comprehensive scheme strengthening of transmission system in states of Arunachal Pradesh & Sikkim. The actual expenditure was Rs.15576.30 which is 103.52 % of BE and 99.69% of RE. There was no significant shortfall with reference to RE.

3.8 The utilization of Gross Budgetary Support against the Budget Estimate since the year 2007-08 is shown below:

(Rs. in crore)

SL. No.	Year	BE			RE			Actual		
		Plan	Non-Plan	Total	Plan	Non-Plan	Total	Plan	Non-Plan	Total
1.	2007-08	5483.00	411.19	5894.19	4350.00	404.53	4754.53	4308.93	235.24	4524.83
2.	2008-09	6000.00	395.76	6395.76	6100.00	271.51	6371.50	6044.86	196.05	6246.02
3.	2009-10	9230.00	276.73	9506.73	6814.00	216.80	7030.80	6710.45	208.74	6920.72
4.	2010-11	10630.00	133.58	10763.58	8725.22	114.69	8839.91	8494.23	107.36	8709.16
5.	2011-12	9642.00	137.68	9779.68	6051.00	131.34	6182.34	4699.36	127.37	4827.35
6.	2012-13	9642.00	133.77	9775.77	4708.00	410.86	7901.93	2535.59	3526.88	6063.59
7.	2013-14	9642.00	671.70	10313.7	5000.00	410.86	5410.86	4529.72	650.81	5180.53
8.	2014-15	9642.00	126.50	9768.5	5700.00	126.63	5598.00	5590.21	120.08	4999.59
9.	2015-16	6799.74	134.76	6934.50	8084.37	129.30	8213.67	7826.84	127.80	7954.64
10.	2016-17	8763.39	3489.32	12252.71	8098.12	2377.83	10475.95	7193.80	3815.57	11009.37
11.	2017-18	10295.46	3585.68	13881.14	10295.46	1896.33	14914.93	-	-	-
12.	2018-19	-	-	15046.92	-	-	15625	-	-	15576.30

3.9 The actual utilization of budgetary allocation since the year 2014-15 as against the Budget Estimates is shown below:

(Rs. in crore)

Financial Year	Component	BE	RE	Actual
2014-15	GBS	9642.00	5700.00	13315.98
	IEBR	50742.02	49788.18	51954.23
	Total	60384.02	55488.18	65270.21
2015-16	GBS	6799.74	8084.37	7826.84
	IEBR	54604.73	58285.19	55815.83
	Total	61404.47	66369.56	63642.67
2016-17	GBS	12200.00	10413.66	7259.32
	EBR	-	5000.00	5000.00
	IEBR	67683.57	67069.66	42208.37
	Total	79883.57	82483.32	54467.69
2017-18	GBS	13881.14	14914.93	9601.51
	EBR	4000.00	4000.00	4000.00
	IEBR	68256.70	60317.69	55309.99
	Total	86137.84	79286.62	68911.50
2018-19	GBS	15046.92	15625.19	15576.88
	EBR	15000.00	20504.76	19331.76
	IEBR	53468.66	73188.72	71996.59
	Total	83515.58	109285.67	106905.23

3.10 The Ministry of Finance (MoF) have issued instructions to the effect that expenditure during the financial year be evenly spread through Monthly Expenditure Plan (MEP). The instructions *inter-alia* provide that the expenditure in the last quarter should

not be more than 33% of the budget and also not more than 15% during the month of March of a financial year.

3.11 The Ministry have furnished the details of Plan & Non-Plan quarter wise utilization of the budget allocations for the last five years as under:

Plan						
FY (Allocation in BE)		**Qtr 1**	**Qtr 2**	**Qtr 3**	**Qtr 4**	**Total**
2014-15 (9642.00)	**Actuals**	101.16	3082.23	1438.87	967.95*	5590.21
	Percentage	1.05	31.97	14.92	10.04	57.98
2015-16 (6799.74)	**Actuals**	1522.92	2269.01	2411.88	1623.03	7826.84
	Percentage	22.40	33.37	35.47	23.87	115.10
2016-17 (12200.00)	**Actuals**	2544.43	2934.02	1530.39	3948.30	10957.14
	Percentage	20.86	24.05	12.54	32.36	89.81
Non-Plan						
2014-15 (126.50)	**Actuals**	35.44	32.55	29.41	22.68	120.08
	Percentage	28.02	25.73	23.25	17.92	94.92
2015-16 (134.76)	**Actuals**	35.49	36.77	32.57	22.97	127.80
	Percentage	26.34	27.29	24.17	17.05	94.84
2016-17 (150.99)	**Actuals**	38.92	50.93	35.92	30.86	156.68
	Percentage	25.78	33.73	23.79	20.44	103.77

* This does not include ₹ 7725.77 crore as loan (Bonus Debentures) to NTPC with effect from FY 2017-18; the distinction between Plan & Non-Plan has been done away with.

FY (Allocation in BE)		**Qtr 1**	**Qtr 2**	**Qtr 3**	**Qtr 4**	**Total**
2017-18 (13881.14)	**Actuals**	2676.57	2323.30	4151.72	449.92	9601.51
	Percentage	19.28	16.74	29.91	3.24	69.17
2018-19 (15046.92)	**Actuals**	8038.03	2096.32	1942.02	3499.93	15576.30
	Percentage	53.42	13.93	12.91	23.26	103.59

3.12 When the Committee asked the reasons for deviation in quarterly spending, the Ministry in their written reply have stated as under:

"The significant rise in Plan expenditure during 2nd Quarter of 2014-15 is because of accumulation of the releases due under the flagship schemes erstwhile RAPDRP and erstwhile RGGVY in 1st Quarter due to declaration of Model Code of Conduct consequent upon the declaration of Lok Sabha general elections.

The significant rise in Plan expenditure during 4th d Quarter of 2016-17 is because of accumulation of the releases due under the flagship schemes IPDS, PSDF and DDUGJY during 3rd Quarter.

In general, the progress of expenditure/release of scheme funds is dependent on the number of factors such as the time of receipt of mature 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 have been the major factor for variation in the expenditure across different quarter."

IV. MINISTRY OF POWER SCHEMES (FUNDED THROUGH GBS)

A. Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY)

4.1 The Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) is the scheme introduced by the Government of India in 2014-15. The erstwhile Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) scheme which was launched by Government of India in April, 2005 for providing access to electricity to all households has been subsumed under DDUGJY Scheme as Rural Electrification Component. The scheme will cover works relating to feeder separation, strengthening of sub-transmission & distribution systems, including metering of distribution transformers/feeders/consumers and rural electrification.

4.2 The following components have been prescribed under the DDUGJY:

(i) Separation of agriculture and non-agriculture feeders to facilitate Discoms in the judicious rostering of supply to agricultural and uninterrupted quality power supply to non-agricultural consumers.
(ii) Strengthening and Augmentation of Sub Transmission & Distribution infrastructure in rural areas, including metering of Distribution Transformers/feeders/consumers and
(iii) Rural Electrification: The erstwhile Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) scheme which was launched by Government of India in April, 2005 for providing access to electricity to all households has been subsumed under DDUGVY Scheme as RE component. The outlay of RGGVY scheme for the 12^{th} and 13^{th} Plans shall be carried forward under DDUGJY.

4.3 In regard scope of the works under DDUGJY, the Ministry has furnished the following details:

1. Feeder Separation

(i) Physical separation of HT feeders for Agricultural and non-Agricultural consumers

(a) Erection of HT lines for drawing new feeders and reorientation/re-alignment of existing lines

(b) Installation of new distribution transformers and augmentation of existing distribution transformers

(c) Re-location of distribution transformers and associated LT lines for re-grouping of consumers (Agricultural and Non-Agricultural)

(ii) Virtual separation of feeders

(a) Installation of new distribution transformers and augmentation of existing distribution transformers

(b) Re-location of distribution transformers and associated LT lines for re-grouping of consumers (Agricultural and Non-Agricultural)

(c) Installation of rotary switch and associated hardware at sub-stations

Feeders already segregated by the States Discoms / Power Deptt. shall not be eligible to be covered under this scheme. However, the feeders already segregated by virtual means could be considered for undertaking physical separation under the scheme.

2. Strengthening of sub-transmission and distribution system in rural areas to address critical gaps

The following works shall be eligible to be covered under the scheme based on study/ assessment carried by the respective State Discoms/ Power Department for identifying critical gaps in sub-transmission and distribution network considering all relevant parameters (such as voltage regulation, HT & LT ratio, optimum loading of transformers & lines, reactive power management, power factor improvement, standard of performance, ongoing works under other schemes, etc.)

(i) Creation of new sub stations along with associated 66 KV / 33 KV/ 22 KV/ 11 KV lines.

(ii) Augmentation of existing sub-stations capacity by installation of higher capacity/additional power transformer along with associated equipment/ switchgear, etc.

(iii) Erection of HT lines for reorientation/re-alignment, including augmentation of existing lines

(iv) Installation of new distribution transformers and augmentation of existing distribution transformers along with associated LT lines

(v) Installation of capacitors

(vi) Renovation and Modernization of existing sub-stations and lines

(vii) High Voltage Distribution System (HVDS)

(viii) Arial Bunched Cable for theft prone areas

3. Metering

(i) Installation of suitable static meters for feeders, distribution transformers and all categories of consumers for existing un-metered connections, replacement of faulty meters & electro-mechanical meters

(ii) Installation of Pillar Box for relocation of meters outside the premises of consumers, including associated cables and accessories.

4. Rural electrification component as per ongoing RGGVY scheme in accordance with CCEA approval dated 01.08.2013 for continuation of scheme in 12th and 13th Plan and applicable guidelines.

5. Completion of optical fibre missing links to connect all the 33 KV or 66 KV grid sub stations under the establishment of the National Optical Fibre Network (NOFN).

6. Creation of rural electrification data hub at REC.

7. Provisioning of micro-grid and off-grid distribution network.

Above works shall be eligible under the scheme provided the proposed scope of works is not covered under any GoI program like R-APDRP/ RGGVY / NEF, etc. The projects for which any other grant / subsidy from Government of India has already been received / proposed to be received shall not be eligible under this scheme. State Level Standing Committee (SLSC) under the chairmanship of Chief Secretary shall ensure that there is no duplication of works while recommending the projects to the Nodal Agency.

4.4 All Discoms, including private sector Discoms and State Power Departments, are eligible for financial assistance under the scheme. In case of private sector Discoms where the distribution of power supply in rural areas is with them, projects under the scheme will be implemented through a State Government Agency and the assets to be created under the scheme will be owned by the State Government / State owned companies. These assets will be handed over to the Discom concerned for their use during the license period on mutually agreed terms & conditions. The responsibility of operation and maintenance of these assets would be of the Discom concerned.

4.5 The Discoms will prioritize strengthening of rural infrastructural works considering specific network requirement and will formulate Detailed Project Reports (DPRs) of the

projects for coverage under the scheme. The DPRs will be recommended by existing State Level Standing Committee (SLSC) constituted for RGGVY programme under the chairmanship of Chief Secretary before submission to the Nodal Agency. The projects shall be appraised and duly recommended by the Nodal Agency for approval of the Monitoring Committee chaired by Secretary, Ministry of Power, and Government of India.

4.6 The projects shall be implemented on turn-key basis. The turn-key contract shall be awarded by the utilities concerned through e-tendering in accordance with the prescribed Standard Bidding Document and Technical Specifications. The projects have to be awarded within six months of date of communication of the approval by the Monitoring Committee. However, in exceptional circumstances, execution on partial turn-key/departmental basis shall be permitted with the approval of the Monitoring Committee.

4.7 The Ministry have enumerated the following features of DDUGJY:

- DDUGJY scheme covers all rural areas, irrespective of any population criteria to ensure access to electricity to all rural households in the country.
- DDUGJY is a comprehensive scheme which covers all aspects of distribution of electricity in rural areas, including feeder separation, strengthening & augmentation of sub-transmission & distribution network and metering for feeders/distribution transformers/ consumers. Besides this, provision has been made to connect all 33/11 KV sub-stations under National Optical Fiber Network,
- Installation of higher capacity Distribution Transformers (63 KVA and 100 KVA) have been allowed.
- Complete flexibility has been provided to the States to priorities scope of work as per their requirement.
- The works in Gram Panchayat selected under Saansad Adarsh Gram Yojana (SAGY) shall necessary be included in the DPR.
- States have notified District Electricity Committee headed by the senior most MP of the district. The District Electricity Committee are expected to meet at least

once in 3 months at the District headquarters. The Committee are consulted in the preparation of DPRs and monitor the implementation of the scheme.

- Uniform Procurement Policy with Standard Bidding Document and Technical Specifications has been prescribed. E-tendering has been made mandatory.
- To ensure efficient and effective implementation of scheme by the States, provision for Project Management Agency (PMA) has been made to assist them in project formulation, bid processing, monitoring, etc. for timely implementation of scheme. 100% grant will be provided by Government of India towards expenditure incurred on Project Management Agency (PMA) as per provision in the scheme, i.e. up to 0.5% of cost of works.
- No cost overrun on account of any reasons whatsoever shall be allowed over & above project cost approved by the Monitoring Committee for the purpose of determining grant component. Any such escalation to be borne by utilities / State through own resources/loan from FIs.
- Utilities have to appoint a Project Management Agency to assist them in project formulation, bid process, preparing detailed work schedule, monitoring, MIS, etc. till completion of project. 100% grant (limited to 0.5% of project cost) will be provided by GOI.
- Rural Electrification Corporation (REC) is the Nodal Agency for operationalisation of the scheme.
- All Discoms, including private sector Discoms and State Power Departments, are eligible for financial assistance under the scheme.
- The scheme will be implemented during the 12th and 13th Plans in cooperation with the Discoms and the State Governments and will facilitate 24x7 reliable and adequate power supply in the rural areas.

4.8 The Funding Mechanism for DDUGJY will be as given under:

Agency	**Nature of support**	**Quantum of support (Percentage of project cost)**	
		Other than Special Category States	Special Category States #
Govt of India	Grant	60	85
Discom Contribution	Own Fund	10	5
Lender (FIs/ Banks)	Loan	30	10
Additional Grant from GOI on achievement of prescribed milestones	Grant	50% of total loan component (30%) i.e. 15%	50% of total loan component (10%) i.e. 5%

Maximum Grant by GOI (including additional grant on achievement of prescribed milestones)	**Grant**	**75%**	**90%**

#Special Category States *(All North Eastern States, including Sikkim, J&K, Himachal Pradesh, Uttarakhand)*

4.9 Additional grant (i.e. conversion of 50% of loan component) under the scheme will be released, subject to achievement of following milestones:

(a) Timely completion of the scheme as per laid down milestones
(b) Reduction in AT&C losses as per trajectory finalized by MOP in consultation with State Governments (Discom-wise)
(c) Upfront release of admissible revenue subsidy by State Govt. based on metered consumption,

4.10 The Ministry have stated that under DDUGJY, project of Rs. 43,438.74 crores have been approved by the Monitoring Committee of Ministry of Power. Further, additional projects of Rs.14,270 crore have been sanctioned under DDUGJY for creation of additional infrastructure to cater to the requirement of household electrification under Saubhagya scheme. The scheme is available till 2021-22. The States have reported that all the inhabited census villages across the country stand electrified on 28.04.2018, ahead of the timeline i.e. May, 2018.

4.11 Further, under DDUGJY, during Financial Year 2018-19 and Financial Year 2019-20 (up to 31.08.2018) grant of Rs.16,427 crore and Rs.1,898 crore respectively has been released. During the Financial Year 2004 to 2018, grant of Rs.54,677 crore was disbursed under DDUGJY. The year-wise financial achievements, is given as under:

(Rs. in crore)

Year	Budget allocation	Fund Released by MoP
2004-05	400	400
2005-06	1,100	1,100
2006-07	3,000	3,000
2007-08	3,945	3,913
2008-09	5,500	5,500
2009-10	5,000	5,000
2010-11	5,000	5,000
2011-12	3,544	2,237
2012-13	2,492	698
2013-14	3,138	2,939
2014-15	3,386	3,374
2015-16	4,500	4,500
2016-17	8,000 (GBS:3,000 & EBR: 5,000)	7,966
2017-18	9,400 (GBS:5,400 & EBR: 4,000)	9,050
2018-19	16,427 (GBS:3,800 & EBR: 12,627)	16,427
2019-20 (upto 31.08.2019)	11,066 (GBS:4,066 & EBR: 7,000)	1898
Total	**85,898**	**73,002**

4.12 Projects sanctioned under DDUGJY:

Sl. No.	Particulars	Sanctioned Cost (Rs. in crore)
1.	Feeder Separation	15,560
2.	System Strengthening including access to HHs	20667
3.	Metering	3896
4.	Electrification of un-electrified villages (Grid)	1,512
5.	Electrification of un-electrified villages (Off-Grid)	1,208
6.	SAGY works	398
7.	Provision for Project Management Agency	210
	Total Project Cost	**43,451**

- Additional projects with total cost of Rs.14270 crore also sanctioned under DDUGJY to support 100% household electrification of Saubhagya, with the approval of MoF.

4.13 In regard to funding of the Scheme the Ministry have stated that sufficient funds are made available by the Government of India and there are no fund constraints under the scheme.

4.14 In regard to status of implementation of components other than rural electrification of DDUGJY, the Ministry have stated that DDUGJY scheme is available till 2021-22. However, Government of India is impressing upon states for completion of all the component of DDUGJY including separation of agriculture and non-agriculture feeders, strengthening and augmentation of sub-transmission & distribution infrastructure before the schedule time.

4.15 It has been further stated that the achievement under separation of agriculture and non-agriculture feeders, strengthening and augmentation of sub-transmission & distribution infrastructure components have generally been satisfactory considering a large focus towards expeditious completion of village and household electrification. The progress in some of the States is slow due to delay in award of the contract, delay in getting forest & railway clearances, land acquisition for sub-stations, Right of Way (RoW) issues, law & order issues and difficult terrain etc.

4.16 They have also stated that 2910 new Sub-Stations established/augmented; 94,380 km feeder Separation completed; 1,16,792 km HT line erected; 2,88,852 new DT installed; 1,97,267 km new LT line erected. Overall progress of DDUGJY in the country: 62%.

4.17 When the Committee asked about the monitoring mechanism for proper implementation of DDUGJY, the Ministry in their written reply have furnished the following information:

> "The following monitoring mechanisms for proper implementation of Deen Dayal Upadhyaya Gram Jyoti Yojana, has been adopted:
>
> - At State level, a Committee under the Chairmanship of Chief Secretary is in place to monitor progress and resolve issues relating to

implementation viz. allocation of land for sub-stations, right of way, forest clearance, railway clearance, safety clearance etc.

- At District level, District Development Co-ordination & Monitoring Committee namely DISHA (administered by Ministry of Rural Development) headed by senior most Member of Parliament (LokSabha) is in place to review and monitor implementation of central sector schemes including DDUGJY.
- At Central level, Inter-Ministerial Monitoring Committee on DDUGJY headed by the Secretary, Ministry of Power, Government of India also monitors implementation of scheme. Besides, progress is also reviewed with States / Power Utilities in Review, Planning and Monitoring (RPM) meeting of Ministry of Power.
- REC Limited, the nodal agency, monitors implementation of scheme through its project offices at field level.
- The Project Management Agency (PMA) appointed by Project Implementing Agencies (PIAs) to assist them in implementation of projects in such activities which involves formulation of Detailed Project Reports (DPRs), award of works, monitoring the progress, quality monitoring etc."

4.18 When the Committee desired to know as to what extent the present monitoring mechanism has been successful considering many complaints about various irregularities and use of sub-standard materials by various Members, the Ministry have submitted as under:

"For monitoring the quality of material/equipment and the erection works, three-tier quality assurance mechanism has been established under RE Component. At first tier Project Implementing Agency (PIA) i.e. DISCOMs/Power Departments have engaged a Third Party Inspecting Agency (TPIA) for assuring quality. They conduct pre-dispatch quality checks of 10% of major items such as DTR, conductor, Energy meter, poles and insulators etc. and verify the quality of works in 50% of the villages. At Second Tier, REC has engaged independent agency to verify the quality of works in 10% of the villages in addition to conducting pre-dispatch quality checks of six major items at the vendor's outlet. At third tier, National Quality Monitors-NQMs have been engaged by the Ministry. NQM covers 1% of villages covered in the project. For new project under

DDUGJY, the DISCOMs/Power Deptt are responsible for assuring quality. The defects in works reported by Quality Monitors are rectified by the respective Implementing Agencies. The complaints received, are addressed by the concerned State, Utility, Implementing Agencies for remedial measures/compliance."

4.19 When the Committee desired for more meaningful role of local representatives in monitoring and grievance redressal pertaining to the scheme, the Secretary Power assured the Committee as under:

"हम □□□□ □□□□ □□□□□□□□□ □□□□□□□□□□ □□□□□□ □□□□ □□□□ यह □□ □□□□ □□□□□□ □□□□ □□□□□ □□ □□-ई-□□ □□ □□□□□□ □□□□□□□□□□ समय पर □□ □□□ □□ □□ □□□□ □□ □□□ □□□ □□□ □□□□ □□ □□□ □□ □□ □□□□□ □□□□ □□ □□□ □□□ □□□□ □□ □□□□□ □□□□, □□ □□□□□□□□ हम कर □□□□□ □□ □□-ई-□□ □□ □□□ जगह □□□□□□ □□ और समय पर □□□ □□□□ □□□□ □□□□□□□□□□ □□ □□□□ और □□□ □□□ □□□□ □□□□ □□ □□ □□□ □□ □□□□□□ □□□□ □□, □□□□ □□□□ □□□ □□ □□□□□□□□□□ □□□....I can say at this moment that even if it is merged in DISHA, there is a strong electricity power sector component. We will put in a system of monitoring whether DISHA meetings are being convened or not convened; what is happening in those meetings regarding electricity sector; and whatever is communicated to us, we will monitor and provide response for the same. This much is the only thing that I can promise."

SAUBHAGYA SCHEME

4.20 Government of India has approved Pradhan Mantri Sahaj Bijli Har Ghar Yojana– "Saubhagya" with an outlay of Rs. 16,320 crore including a Gross Budgetary Support (GBS) of Rs. 12,320.00 crore from Government of India. As per the Ministry of Power the objective of the scheme is to achieve universal household electrification by providing last mile connectivity and electricity connections to all remaining un-electrified households in rural and urban areas. The scheme provides:

(a) Last mile connectivity and electricity connections to all un-electrified households in rural areas.

(b) Solar Photo Voltaic (SPV) based standalone systems for un-electrified households located in remote and inaccessible villages / habitations, where grid extension is not feasible or cost effective

(c) Last mile connectivity and electricity connections to all remaining economically poor un-electrified households in urban areas. Non-poor urban households are excluded from this scheme.

4.21 The Ministry of Power has enumerated the following salient features of the Saubhagya: Pradhan Mantri Sahaj Bijli Har Ghar Yojana:

- ✓ 'Har Ghar' – Universal coverage without any discrimination
- ✓ 'Sahaj' – Simple / Easy / effortless
  - Camps in villages / cluster of villages
  - Use of Mobile App for electronic registration including requisite documentation
  - On spot release of connection
- ✓ No upfront fee for availing electricity connection
  - Free connection for poor households
  - For other households, Rs.500 to be charged after release of connection in 10 instalments (Rs50 each) to be adjusted in monthly electricity bills
- ✓ Identification of beneficiaries based on SECC 2011 data

- ✓ SPV based standalone systems for households located in remote and inaccessible areas

4.22 In regard to timeline for implementation of this scheme, it has been stated that all States/UTs were required to complete the works of households' electrification by 31st March, 2019. However, spillover works; if any will continue till 2021-22. The progress of rural household electrification is being updated by the respective State DISCOMs directly on Saubhagya web-portal.

4.23 The Ministry have stated that all States declared electrification of all households on Saubhagya portal as on 31Mar2019, except 18,734 households in LWE affected areas of Chhattisgarh. Since launch of Saubhagya, 2.63 crore households were electrified across the country up to 31.03.2019.

4.24 They have further stated that subsequently seven States namely Assam, Chhattisgarh, Jharkhand, Karnataka, Manipur, Rajasthan, and Uttar Pradesh reported that there are 19.09 lakh un-electrified households which were earlier un-willing, and now willing to get electricity connection, identified before 31Mar2019. States have been asked to electrify these household under Saubhagya by 31st December, 2019. Out of these 3.44 lakh households have been electrified up to 27.09.2019.

4.25 On being asked by the Committee, the Ministry have furnished the details of State-wise households to be electrified, which were earlier unwilling and now willing to get electricity connection, as on 27.09.2019 which is given below:

S. NO.	Name of the State	Un-electrified HHs (un-willing earlier)	Households electrified from 01.04.2019 to 27.09.2019	Balance un-electrified HHs to be electrified (as on 27.09.2019)
1.	Assam	2,00,000	53,662	1,46,338
2.	Chhattisgarh	40,394	456	39,938
3.	Jharkhand	2,00,000	23,396	1,76,604
4.	Karnataka	39,738	19,842	19,898
5.	Manipur	1,141	1,980	0
6.	Rajasthan	2,28,403	1,93,017	35,386
7.	Uttar Pradesh	12,00,000	52,149	11,47,851
Total		**19,09,676**	**3,44,502**	**15,66,013**

4.26 The Ministry have stated that At present, there is no major issue in electrification of balance un-electrified households brought to the notice. Nevertheless, proactive steps are taken by Ministry of Power, Government of India and concerned State Government/DISCOM for early electrification of balance un-electrified households.

4.27 When the Committee asked whether a household, which is not included in the list provided by the State Government/Census, is also eligible for getting electricity connection under the scheme, the Ministry have stated as under:

> "All un-electrified households which are in deprived category as per SECC, 2011, are given free electricity connections under the scheme. The households not found eligible as per SECC data are also provided electricity connection on payment of Rs.500/- per household which shall be recovered by the respective DISCOM/Power Department in ten (10) equal installments along with subsequent electricity bills.

Further, under the scheme campaign for mass awareness were launched in the form of movement of special vehicle namely Saubhagya Rath across Districts, door to door campaign, publication in Print and Electronic Media, Organization of camps in villages / cluster of villages were organized for on the spot registration and release of connections. Even after saturation of particular district/village special camps and Saubhagya Raths were planned in areas to ensure electricity connection to each and every willing un-electrified household.

Release of electricity connection is an ongoing process and States/Discoms keep releasing connection as per their extant policies."

4.28 On being further probed by the Committee about the grievance redressal system for Saubhagya Scheme, the Ministry have state that the Saubhagya scheme is a time bound programme, accordingly dedicated 24x7 toll free helpline number1800-121-5555 to facilitate any left out un-electrified household and for redressal of grievance under Saubhagya scheme, were made available till 31st March, 2019. Now applicant can register their grievances related to Saubhagya scheme on helpline number-1912 or concern State DISCOMs helpline number or write/email to concern State DISCOMs, REC, Ministry of Power or online on Centralized Public Grievance Redress and Monitoring System (CPGRAMS).

B. Integrated Power Development Scheme (IPDS)

4.29 The Integrated Power Development Scheme (IPDS) was formulated on 20th November, 2014 with an objective to provide 24x7 power supplies for consumers, to providing access to all urban households and facilitate State Power Utilities to reduce the level of AT&C losses to 15% by:

i. Strengthening of sub-transmission and distribution network in the urban areas
ii. Metering of distribution transformers/feeders/consumers in the urban areas
iii. IT enablement of distribution sector and strengthening of distribution network as per CCEA approval dated 21.06.2013 for completion of targets laid down under Restructured Accelerated power Development and Reforms Programme (R-APDRP) for 12th and 13th Plans by carrying forward the approved outlay of R-APDRP to IPDS.

4.30 The scheme is designed to help in AT&C loss reduction, establishment of IT enabled energy accounting/auditing improvement in billed energy based on metered consumption and improvement in collection efficiency.

4.31 The programme (excluding R-APDRP component) have estimated outlay of Rs. 32,000 crore including a budgetary support of Rs. 25,354 crore from Government of India during the entire implementation period. Besides this R-APDRP scheme cost of Rs 44,011 crore including a budgetary support of Rs 22,727 crore as already approved by CCEA will be carried forward to the new scheme of IPDS in addition to the outlay for other components. It has been further informed that funding under IPDS shall also be for completion of optical fiber missing links to connect all the 33 KV or 66 KV grid sub-stations under the establishment of National Optical Fiber Network, establishment of National Power Data hub at CEA and installation of solar panels.

4.32 The funding mechanism under IPDS scheme is proposed as under:

Special Category States (All North Eastern States including Sikkim, J&K, Himachal Pradesh, Uttarakhand)

Agency	**Nature of support**	**Quantum of support (Percentage of project cost)**	
		Other than Special Category States	Special Category States #
Govt. of India	Grant	60	85
Discom Contribution*	Own Fund	10	5
Lender (FIs/ Banks)	Loan	30	10
Additional Grant from GOI on achievement of prescribed milestones	Grant	50% of total loan component (30%) i.e. 15%	50% of total loan component (10%) i.e. 5%
Maximum Grant by GOI (including additional grant on achievement of prescribed milestones)	**Grant**	**75%**	**90%**

*Minimum contribution by Discom(s) is 10% (5% in case of Special Category States). However, Discom(s) contribution can go up to 40% (15% in case of Special Category States), if they do not intend to avail loan. In case, the Discom(s) do not avail loan, the maximum eligible additional grant would be 15% (5% in case of Special Category States) on achievement of prescribed milestones. The loan component would be provided by PFC or by other FIs / Banks.

4.33 Additional grant (50% of loan component i.e. 5% for special category States and 15% for other States) shall be released subject to achievement of following milestones:

(a) Timely completion of the scheme as per laid down milestones
(b) Reduction in AT&C losses as per trajectory finalized by MOP in consultation with State Governments (Discom-wise)
(c) Upfront release of admissible revenue subsidy, if any, by State Govt. based on metered consumption.

4.34 Restructured Accelerated Power Development & Reforms Programme (R-APDRP) was approved as a central sector scheme for implementation during XI Plan & the sanction of the President for same was conveyed vide MoP order dated September 19,2008. The completion period for Part-A of the scheme was further extended by 2 years

vide MoP order dated July 08, 2013. The scheme has been approved by CCEA for continuation in 12th and 13th Plans and R-APDRP Steering Committee has been authorized to grant further time extension for successful completion of project.

4.35 The scheme comprises of three parts-Part-A, Part-B & Part C. Part-A of the scheme is dedicated to establishment of IT enabled system for achieving reliable & verifiable baseline data system in all towns with population greater than 30,000 as per 2001 census (10,000 for Special Category States). Implementation of SCADA/DMS for towns with population greater than 4 lakhs & annual input energy greater than 350MU is also envisaged under Part-A.

4.36 Part-B deals with regular Sub Transmission & Distribution system strengthening & upgradation projects. The focus in Part-B is on reduction of Aggregate Technical & Commercial (AT&C) losses on sustainable basis and on improvement of Distribution system. Part-B is considered for sanction for towns where Part-A(IT) is implemented. R-APDRP also has provision for Capacity Building of Utility personnel and development of franchises under Part-C of the scheme. Few pilot projects adopting innovations are also envisaged under Part-C. The funding under Part C is through grant.

4.37 In regard to progress of implementation of the scheme, the Ministry have furnished a note as under:

> "**Total Sanction Rs.32,059 Cr. for 546 circles in 32 States/UTs** including IT-Phase -II projects worth Rs. 985 Cr. have been sanctioned for 1931 towns, ERP projects worth Rs, 792 crore and Smart metering projects worth Rs. 835 crore, RT DAS projects of Rs. 209 crore and GIS projects

worth Rs. 978 crore.

- **An amount of Rs. 11,737 Cr. (of GOI component of Rs.20,103cr)** has been released by MoP to States in addition to Rs. 181 Cr. for enabling activities for implementation of urban distribution system strengthening projects under IPDS.
- As reported by Utilities, ST&D works completed in 336 circles out of 546 Circles."

4.38 On being enquired by the Committee about the achievement so far under the scheme, the Ministry have stated that the achievements are on expected lines. Against target of 223 Circle completions in FY 18-19, 100% completion was achieved. The completed works include new 782 sub-stations, capacity augmentation of 1330 existing sub-stations, 27,819KM new overhead lines, laying of 58,465KM underground/Aerial Bunched Cables etc.

4.39 The Ministry have informed that AT&C losses at All India level as per latest available report (2015-16) of 'Performance of State Power Utilities' as released by Power Finance Corporation stand at 23.98%.

4.40 When the Committee asked for the details of the towns where the scheme has been fully implemented, the Ministry in their written reply have stated that IPDS scheme is implemented Circle wise and not town wise. The scheme has been sanctioned in 546 Circles across the country and till date has been completed in 336 Circles.

Discom wise completion of Circles is as follows:

S.No.	State	Utility	Circles Covered (No)	Circles Completed (No)
1	Andaman and Nicobar Islands	AN-DISCOM	1	0
2	Andhra Pradesh	APEPDCL	5	5
3		APSPDCL	8	8
4	Arunachal Pradesh	Arunachal-PD	3	0
5	Assam	APDCL	19	4
6	Bihar	NBPDCL	7	1
7		SBPDCL	9	3
8	Chhattisgarh	CSPDCL	15	7
9	Delhi	NDMC	1	0
10	Goa	Goa-PD	2	0
11	Gujarat	DGVCL	4	4
12		MGVCL	5	5
13		PGVCL	11	11
14		UGVCL	4	4
15	Haryana	DHBVNL	9	7
16		UHBVNL	9	8
17	Himachal Pradesh	HPSEBL	12	4
18	Jammu & Kashmir	JKPDD	12	0
19	Jharkhand	JBVNL	15	6
20	Karnataka	BESCOM	9	9
21		CESCOM	4	3
22		GESCOM	4	3
23		HESCOM	7	5
24		MESCOM	4	4
25	Kerala	CPT	1	1
26		KSEBL	25	15
27	Madhya Pradesh	MPMKVVCL-C	14	7
28		MPPKVVCL-E	15	15

29		MPPKVVCL-W	14	10
30	Maharashtra	BEST	1	0
31		MSEDCL	45	25
32	Manipur	Manipur-PD	3	0
33	Meghalaya	MePDCL	6	3
34	Mizoram	Mizoram-PD	1	0
35	Nagaland	Nagaland-PD	2	0
36	Odisha	CESU	5	1
37		NESCO	5	2
38		SOUTHCO	6	3
39		WESCO	5	3
40	Puducherry	Puducherry-PD	1	0
41	Punjab	PSPCL	20	11
42	Rajasthan	AjVVNL	12	12
43		JaVVNL	13	13
44		JoVVNL	10	10
45	Sikkim	Sikkim-PD	6	0
46	Tamil Nadu	TANGEDCO	37	25
47	Telangana	TSNPDCL	5	5
48		TSSPDCL	9	9
49	Tripura	TSEC	9	0
50	Uttar Pradesh	DVVNL	17	15
51		KESCO	1	1
52		MVVNL	12	8
53		PaVVNL	21	18
54		PoVVNL	16	9
55	Uttarakhand	UPCL	11	9
56	West Bengal	DPL	1	0
57		WBSEDCL	18	5
	Total :		546	336

4.41 When the Committee asked whether the areas where the IPDS scheme is implemented have AT&C losses lower than 15%, the Ministry in reply have submitted that Works in 336 Circles have been completed in FY18-19 & FY19-20, but such report is yet to be released for said FY. Circle wise AT&C loss reports are not available with IPDS Unit, PFC.

C. Bureau of Energy Efficiency (BEE)

4.42 The Government of India enacted the Energy Conservation Act (EC Act, 2001 and for implementing various provisions in the EC Act, Bureau of Energy Efficiency (BEE) was operationalised with effect from 1st March, 2002. The EC Act provides a legal framework for energy efficiency initiative in the Country. The Act has mandatory and promotional initiatives which broadly relates to Designated Consumers, Standards and Labeling programme for equipment and appliances and Energy Conservation Building Codes (ECBC) for new commercial buildings and residential buildings. The EC Act also empowers the State Government to facilitate and enforce the efficient use of energy through their respective State Designated Agencies in consultation with BEE. It also empowers the Central Government to specify energy performance standards.

4.43 Bureau of Energy Efficiency (BEE) is the nodal central statutory body to assist the Government in implementing the provisions of the EC Act. As a quasi-regulatory and policy advisory body, the Bureau helps in developing policies and strategies that emphasize self-regulation and market principles to achieve the primary objective of reducing the energy intensity of the Indian Economy. The EC Act also empowers the State Government to facilitate and enforce the efficient use of energy through their respective State Designated Agencies in consultation with BEE. It also empowers the Central Government to specify energy performance standards.

4.44 Committed towards reducing the emissions, India has been participating as one of the leading party in the Conference of Parties (COP) under the United Nations Framework Convention on Climate Change (UNFCCC). The twenty-first session of the COP that took place in 2015 at Paris reached a landmark agreement called the "Paris Agreement" to combat climate change. The aim of the Paris Agreement is to strengthen the global response to the threat of climate change by keeping the global temperature rise well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. The Government of India has submitted its Nationally Determined Contributions (NDCs) to UNFCCC in 2015, endorsing country's ambitious commitment towards the issues related to climate change and ratified it in the year 2016.

4.45 Budgetary Allocation and its actual utilization for BEE (2012-13 onwards) is as given below:

	2015-16	**2016-17**	**2017-18**	**2018-19**	**2019-20**
BE	48.00	63.29	49.00	100.16	100.16
RE	43.00	60.04	27.00	10.49	-
Actuals	35.00	54.15	27.00	10.49	-

4.46 When the Committee enquired whether the fund allocated for the BEE was sufficient, in reply the Ministry have submitted that The funds allocated for BEE were sufficient and BEE was able to utilize the funds allocated. Also, Due to delay in approval of the schemes, BEE could not utilize as per the approved SFC allocation. However, It may be noted that BEE completed all those activities, which were not dependent on funds but were contributing for the energy conservation in the country. The SFC approval got

delayed as the NITI Aayog instructed BEE to further club all proposed 5 schemes to 2 i.e. per Account head 1 scheme.

4.47 It has been stated that Ministry of Power and Bureau of Energy Efficiency has been taking various steps for conserving energy through various flagship programmes in the areas of industries, appliances, buildings, transport, agriculture and demand side management etc. in order to fulfill the goals committed in the NDC and foster long term sustainable development. A brief of all the schemes being implemented by BEE is as follows:

1. Standards & Labeling

S. No	Mandatory Appliances		Voluntary Appliances
1.	Room Air Conditioners	**1.**	Induction Motors
2.	Frost Free Refrigerator	**2.**	Agricultural Pump Sets
3.	Tubular Florescent Lamp	**3.**	Ceiling Fans
4.	Distribution Transformer	**4.**	LPG-Stoves
5.	Room Air Conditioner (Cassette, Floor Standing)	**5.**	Washing Machine
		6.	Computer (Notebook/ Laptops)
6.	Direct Cool Refrigerator	**7.**	Ballast (Electronic/ Magnetic)
7.	Color TV	**8.**	Office Equipment (Printer, Copier, Scanner,
8.	Electric Geysers		
9.	Variable Capacity Inverter Air Conditioners	**9.**	Multifunctional Display)
			Diesel Engine Driven Mono-set Pumps, submersible and open-well
10.	LED Lamps	**10.**	Solid State Inverter
		11.	DG Sets
		12.	Chillers
			Microwave oven

This scheme was launched with the key objective of providing consumers an informed choice about the energy and cost saving potential of the labelled appliances/equipment being sold commercially. This scheme entails laying down minimum energy performance norms for appliances / equipment, rating the energy performance on a scale of 1 to 5 , 5 star being the most energy efficient

one. Energy labeling is one of the most cost-effective policy tools for improving energy efficiency and lowering associated energy cost of appliances or equipment. The program has been developed in a collaborative manner with a consensus driven approach of all the stakeholders. The programme covers 23 appliances out of which 10 appliances are under the mandatory regime while as the remaining 13 appliances are under the voluntary regime.

2. Energy Conservation Building Code (ECBC)

The Energy Conservation Building Code (ECBC) of BEE sets minimum energy standards for commercial buildings having a connected load of 100kW or contract demand of 120 KVA and above. While the Central Government has powers under the EC Act, the State Governments have the flexibility to modify the code to suit local or regional needs and notify them. Presently, 12 States and 1 UT namely, Rajasthan, Odisha, Uttarakhand, Punjab, Karnataka, Haryana, Kerala, Andhra Pradesh, Telangana, West Bengal, Uttar Pradesh and Union Territory (UT) of Puducherry have notified ECBC for their states. Other states are at advance stages of adopting the ECBC. To support implementation of ECBC in the built environment, several enabling measures have been taken up. These include:

- Empanelment of ECBC expert architects;
- Development of technical reference material such as ECBC User Guide, Tip Sheets for lighting, envelope, HVAC;
- Development of conformance/compliance check tool (ECOnirman) to help architects/ design professionals and code compliance officials to assess conformance with code requirements;
- Capacity building of various stakeholders like State Designated Agencies (SDA), Municipal corporations, Urban Department, CPWD, state PWD etc.;
- Harmonization of ECBC with National Building Code;

3. Demand Side Management (DSM)

Demand Side Management (DSM) has been traditionally recognized as one of the major intervention to achieve reduction in energy demands while ensuring continuous development. In recent past, DSM has gained unprecedented importance and has become an integral part of almost all the central and state missions on promotion of EE. DSM interventions have helped utilities not only to reduce the peak electricity demands and but also defer high investments in generation, transmission and distribution networks.

3.1 Agriculture DSM

Agriculture DSM (Ag DSM) provides immense opportunity in reducing the overall power consumption, improving efficiencies of ground water extraction and reducing the subsidy burden on the states without sacrificing the service obligation of this sector. Pump set efficiency up-gradation is one the key aspects of DSM measures in agriculture sector. The mere replacement of existing inefficient pump sets with energy efficient star rated pump sets is proven to deliver savings of 30-40%.

3.2 Municipal DSM

Identifying the immense energy saving potential in municipal sector, BEE initiated Municipal Demand Side Management (MuDSM). The basic objective of the project was to improve the overall energy efficiency of the Urban Local Bodies (ULBs), which could lead to substantial savings in the electricity consumption, thereby resulting in cost reduction/savings for the ULBs.

3.3 Capacity Building of DISCOMs

The objective of the programme is to initiate capacity building of DISCOMs for carrying out load management programme, energy conservation programme, development of DSM action plan and implementation of DSM activities in their respective areas. This programme would help the DISCOMs for reducing peak electricity demand so that they can delay building further capacity.

Under this initiative, 34 DISCOMS have completed their load research studies and finalized their DSM action plan. In addition, 504 senior/middle level officials of these DISCOMs have been trained as Master Trainer on DSM and energy efficiency and capacity building of about 5000 circle level officials has been completed. Manpower support has also been provided to each DISCOM for facilitation of DSM related activities. This programme has been extended to 28 more DISCOMs for similar DSM related activities to cover about 700 master trainer and 4000 circle level officers.

4. Energy Efficiency in Small and Medium Enterprises (SMEs)

The MSME(micro, small and medium enterprises) sector accounts for about 33% of India's manufacturing output and around 28% contribution in the GDP. There are about 8 million MSMEs in India – and majority of them have not been exposed to energy efficiency (or) technology upgradation measures since they continue to depend on obsolete, low efficiency technologies that result in wasteful energy consumption, thereby reducing their profitability and competitiveness in the sector.

5. National Mission for Enhanced Energy Efficiency (NMEEE)

The National Mission for Enhanced Energy Efficiency (NMEEE) is one of the eight missions under the National Action Plan on Climate Change (NAPCC). NMEEE aims to strengthen the market for energy efficiency by creating conducive regulatory and policy regime and has envisaged fostering innovative and sustainable business models to the energy efficiency sector.

The Mission seeks to upscale the efforts to unlock the market for energy efficiency which was estimated to be around Rs. 74,000 crore and help achieve total avoided capacity addition of 19,598 MW, fuel savings of around 23 million tonnes per year and green house gas emissions reductions of 98.55 million tonnes per year at its full implementation stage.

The NMEEE spelt out four initiatives to enhance energy efficiency in energy intensive industries which are as follows:

- **Perform Achieve and Trade Scheme (PAT),** a market based mechanism to enhance the cost effectiveness in improving the Energy Efficiency in Energy Intensive industries through certification of energy saving which can be traded;
- **Market Transformation for Energy Efficiency (MTEE),** for accelerating the shift to energy efficient appliances in designated sectors through innovative measures to make the products more affordable;
- **Energy Efficiency Financing Platform (EEFP)**, for creation of mechanisms that would help finance demand side management programmes in all sectors by capturing future energy savings;
- **Framework for Energy Efficient Economic Development (FEEED),** for development of fiscal instruments to promote energy efficiency.

6. Transport

Considering the growth of automobile sector, the vehicle population is growing at rate of over 5% per annum an presently the vehicle population is approximately 40 million (Source -SIAM). Given the limited domestic availability of oil and gas, the country is compelled to import over 75% of its domestic requirement and significant part of which is used for road transport. Thus, India's requirements of fossil fuel for the year 2030 are projected to rise to 486 Million tonnes of Oil equivalent. Keeping in view the growing demand of fossil fuel and rapidly growing motor vehicle fleet, Bureau of Energy Efficiency (BEE) initiated development of motor vehicle fuel economy standards. Subsequently MoP and BEE developed the energy consumption standard for motor vehicle in consultation with Ministry of Road Transport & Highways and Department of Heavy Industries.

The Corporate Average Fuel Efficiency (CAFE) standards for passenger cars were notified that would be effective from 2017-18 onwards, and a second set of standards would come into force from 2022-23. BEE is also pursuing for star labeling of passenger cars. Recently, BEE notified the fuel economy norms for Heavy duty vehicles. These norms are applicable for M3 and N3 category vehicles complying with BS IV norms with gross vehicle weight exceeding 12 tonnes.

4.48 While appreciating the work of BEE, the Secretary Power stated before the Committee as under:

> "The Bureau of Energy Efficiency is doing a lot of work. This is not just confined to power sector. They also work for the buildings, industries and others. We have provided the data as to how much savings they have made. The successful programme of LED bulbs was undertaken by us. There is also a very good commercially oriented scheme, PAT, where industries are to perform by saving the electricity use. We will talk about it as we go along. Efficiency is a profitable business. Efficiency leads to saving of the energy that can pay for the investment. It is actually a very heartening to note that most of the schemes that we designed are such where the pay-back period is only two to three years. So, they do not require much of the Government support. If those schemes are run very well, this would lead to a lot of savings and the objectives would be achieved."

4.49 When the Committee desired to know about the main achievement of BEE, the Ministry in their written reply have furnished the following details:

> "BEE conducted a study comparing the actual consumption in 2017-18 with the estimated energy consumption had the current energy efficiency measures not been undertaken, i.e. the counterfactual. The key highlights/ outcomes of the study are as follows:
>
> - Electricity savings of **86.60 BUs (20 GW of avoided capacity generation)** i.e. 7.14% of total electricity consumption of the country
> - Electricity savings resulted in cost savings worth **INR 41,799.40 Crore** and reduction in **69.08 Million tonne of CO2 emissions**
> - Thermal energy savings of **9.41 Million Tonnes of oil Equivalent**
> - Thermal saving resulted in cost savings worth **INR 11828.38 Crore** and reduction in 39.20 Million tonne of CO2 emission.

- Total energy savings of **16.62 Million Tonnes of oil Equivalent** i.e. 1.97% of total primary energy supply of the country
- Total cost savings worth INR **53,627.78 crores** approximately.
- Total reduction in CO2 emission of around **108.28 Million Tonnes."**

4.50 When the Committee desired to know the constrain that BEE is facing in achievements of its objectives, the Ministry in their written reply have stated as under:

"**Issues and Challenges faced by BEE**

Like any other scheme, Bureau has faced many issues and challenges in the ongoing activities. While it has resolved some of them learning from the past experience and developing solutions to address them, some major challenges are still predominant in the energy efficiency sectors which are as follows:

1. Energy Efficiency Financing

Financing still continues to be the grey area in this sector. Energy efficiency financing is still considered to be loaded with high risks in most of the cases. Industries are hesitant to invest with the perception of larger return on investment period. Banks are also sceptical on the projects being undertaken on energy efficiency. ESCOs are facing shortage of adequate funds thereby stalling the projects on ESCO mode and restricting their adequate institutionalization. Though various schemes are in place and picking up the required momentum, still awareness and capacity building on these are required.

2. Awareness among Financial Institutions

Energy Efficiency Financing through commercial banks and NBFCs is facing the lack of awareness and capacity to understand the EE Financing concepts like factors to be considered during appraisal process, technical risk appraisal considerations, etc. At the same time, ESCOs and Industries lack adequate understanding of project financial appraisal concepts.

3. Capacity Building and Awareness of end users

Stepping up the efforts being made towards training, capacity building as well as experience and knowledge exchange across various stakeholder groups. Measures may also be considered towards augmenting the technical competence in the process side among AEAs / EmAEA.

Efforts on awareness for various programmes such as labels in appliances are required to be increased. In general, increasing awareness on energy efficiency will induce a behavioural change in the common masses.

4. Enforcement and Monitoring Reporting &Verification (MRV)

The verification system for various programmes needs strengthening. The M&V system of the PAT scheme in particular is very exhaustive and the auditing agencies involved lack the required expertise. The system needs to be made robust in terms of the quality of reporting. Strict enforcement of the provisions under EC Act is one of the most crucial facto hindering the progress in energy efficiency.

5. State Designated Agencies (SDA)

Except for some SDAs which has a separate and exclusive State Designated Agency (SDA), in all other states mostly the renewable development agencies, electrical inspectorate or the DISCOMs have been given the additional responsibility of functioning as the SDA. Hence, it is difficult for them to implement the activities pertaining to the EC Act effectively. Some of them do lack the required manpower support needed for this activity, despite BEE giving them the manpower and financial support. A lot of problems are being addressed by BEE, but the solution is perhaps a dedicated SDA in the state with adequate and appropriate manpower and resources.

Also, BEE needs to establish its regional offices to guide and steer energy efficiency through SDA/ State BEE in concerned State/UT.

6. Energy Auditor

As Energy Auditors are a key stakeholder who is responsible for the verification for the activities, they need to be very competent. The quality of audit and verification has been a major concern in PAT Cycle-I. Efforts need to be made to strengthen these auditors.

7. Implementation through ESCO route

Implementation of EE projects through ESCO route is one of the tried and tested mechanisms to achieve scalability in many parts of the world. However, this mechanism has not seen much success in India. This is primarily due to the difficulty to undertake M&V in a reliable manner based on a standard M&V protocol, along with lack of understanding and financing. All these factors in combination with the other sector deficiencies have been the major barrier to realization of the objectives of improving energy efficiency."

D. Central Power Research Institute (CPRI)

4.51 Central Power Research Institute (CPRI) was established by the Government of India in 1960. It became an Autonomous Society in the year 1978 under the aegis of the Ministry of Power, Government of India. Central Power Research Institute (CPRI) with its Head Office in Bangalore has Units at Bhopal, Hyderabad, Nagpur, Noida, and Kolkata.

4.52 The major objectives of the CPRI are as under:

- Function as a National Power Research Organization for undertaking and sponsoring R&D projects in the fields of generation, transmission, distribution and operation of electricity supply systems.
- Provide necessary centralized research and testing facilities for evaluation of electrical materials and performance of power equipment.
- Serve as a National Testing and Certification Authority for the purpose of certification of rating and performance to ensure availability of quality equipment for use under conditions prevalent in Indian Power Systems

4.53 The followings have been stated to be the core activities of CPRI:

- Applied Research in electrical power engineering
- Testing & Certification of Power equipment
- Consultancy and Field testing services to Power Utilities and Industries
- Third Party Inspection and Vendor Analysis
- Organizing Customized Training programs for Utilities and Industries

4.54 Funds Allocated for CPRI during the last five years is given below:

(Rs. in Cr)

Financial Year	BE	AE
2014-15	79.82	23.06
2015-16	37.28	47.74
2016-17	65.79	96.29
2017-18	50.36	86.93
2018-19	94.34	92.03
2019-20	200.00	-

4.55 It has been submitted to the Committee that the fund allocated for CPRI were sufficient.

4.56 In reply to the query of the Committee about the non-utilization of allocated fund and the efforts to avoid them, it has been stated as under:

> "During the financial year 2014-15, the fund allocated could not be utilized in full. The XII plan capital projects were approved in Feb 2014 and first installment was released only during March 2014 and hence budget allocated could not be utilised in full.
> CPRI estimates the fund allocation based on the current progress of the ongoing schemes/projects. While making the estimate, the purchase order to be placed, Letter of credit to be opened, part payments to CPWD with respect to civil work, balance payments for equipment installed and commissioned ,outlay of approved research projects are taken into consideration and Budgetary estimate (BE) is arrived. Any delay in the above is taken into consideration while making the Revised Estimate (RE) and the same is utilized in full."

4.57 When asked by the Committee about the main achievements of CPRI, the following information was provided:

> "The Institute has rendered six decades of dedicated service in the field of Short circuit, High Voltage, Seismic, Environmental, Mechanical test to the power sector since its inception. The Institute has strength of around 545 personnel of which over 200 are well qualified and experienced Scientists/Engineer. CPRI is the only testing Laboratory in the world having all the test facilities for power equipment under one roof.
>
> The Institute has completed over more than 400 R&D projects and has been awarded 25 patents over the year and 72 patents are in process for the award. To its credit, the Institute has published over 3700 technical and research paper in national & international forums. The Institute has also brought out over 450 technical reports which are widely referred to by both the utilities and industry. The senior scientists & Engineer represent CPRI in various Electro-Technical Committees of BIS.

CPRI officer are also represented in International Standards Committees like IEC, IEEE, and CIGRE etc."

4.58 In reply to the query of the Committee about the programmes/projects which are currently being run by CPRI and their importance for the power sector, it has been stated by the Ministry as under:

"Programs/Projects which are currently run by CPRI along with importance for the Power Sector

- **Augmentation of High Power Short Circuit test facilities by installation of two additional 2500 MVA generator- Outlay Rs. 509 .00 Cr** – The objective of the proposal is to provide enhanced test facilities for High Power testing of Circuit breaker, Power Transformer and other Power System Equipment.
- **Establishment of 350 MVA Online Short Circuit Test Facility at UHVRL, Hyderabad-Outlay Rs. 120.00 Cr** -This project will meet the demand on the short circuit current withstand capability testing of the LT and MV equipment.
- **Establishment of New Unit at Nashik –Outlay Rs. 115.3 Cr** -The project of establishing new regional unit at Nashik for testing of Distribution & Power transformer, Oil & energy meter will help the manufacturer to test their product at their close proximity in western region.
- **Establishment of Tower Testing Station at Hyderabad –Outlay Rs. 90 Cr** - Creation of test facility for testing of full scale UHV transmission line tower."

4.59 When the Committee desired to know whether there is any constraint that CPRI is facing in achievement of its objectives, it has been stated as under:

"There are no constraints for CPRI in achieving its objectives. CPRI being the nodal coordinator carries out / co-ordinates the R&D schemes of MoP by identifying projects on thrust areas leading to new technology development. CPRI is continuously augmenting its test facilities with grant in aid from Ministry of Power to meet the needs of the electrical industry for

development of products indigenously and also serve the requirement of certification as per National and International standards.”

E. National Power Training Institute (NPTI)

4.60 National Power Training Institute (NPTI) is a National Apex body for fulfilling the training requirements of the power sector in the country formed by Gazette notification of Govt. of India dated: 03.07.1993. It serves as a National Certification Authority for the purpose of Certification of competence and/ or participation to ensure availability of properly trained personnel to man the electricity Supply Industry. NPTI is an ISO 9001 & ISO 14001 leading Training Institute under the Ministry of Power, Govt. of India for Human Resources Development in Power Sector.

4.61 NPTI has been appointed as the Certifying Authority for SYSTEM OPERATOR of NLDC, RLDCs, SLDCs. Also, NPTI functions as an Apex Cadre Training Institute for Engineer/Officer of Central Power Engineering Service (Ministry of Power, Govt. of. India). It has also been recognized as Assessment & Certification Body for 60 Qualification Packs of Power & Renewable Energy Sector by NSDA in the 23rd NSQC meeting held on 22.08.2019.

4.62 It operates through nine (9) Institutes in the different power zones of the country on an all India basis with Manpower Strength of 219 including 87 Officer and has trained over 3,37,900 power professionals in its regular programs over the past five decades. Two more institutes at Alapuzza, Kerala and Shivpuri, Madhya Pradesh will be operational from November 2019.

4.63 The followings are the objective of NPTI:

- To function as a National Organization for training in the field of (a) operation and maintenance of Power Stations; and (b) all other aspects of Electrical Energy Systems including Transmission, Sub-Transmission and Distribution.
- To act as an apex body for initiating and coordinating training programmes in the power sector in the country.
- To establish and run training Institutes for Engineer, Operator, Technicians and other personnel of Power Sector.

4.64 The following functions of NPTI have been enumerated:

- "Long-Term, Medium-Term & Short-Term Training Programs for Engineer & Supervisor in:
  - ✓ Thermal Power plant engineering
  - ✓ Hydro Power
  - ✓ Transmission / Sub-Transmission /Distribution
  - ✓ Smart Grid Technologies
  - ✓ Power System Operations
  - ✓ Energy Market Management
  - ✓ New Regulations for Transmission and Distribution utilities/ generating plants both conventional and RE power plants
  - ✓ Hybrid Energy such as Solar, Wind, Biomass, Co-generation etc.
  - ✓ Large RE Grid Integration technologies
  - ✓ e-Mobility Infrastructure
- Apart from CEA Induction Training Program, NPTI is providing Induction Training to Engineer Trainees of various Public Sector and Private Sector organizations
- NPTI is conducting Seminar, Workshops, Conferences in upcoming thrust areas on concurrent themes and addressing the National Requirements.
- NPTI is conducting specialized training & certification programs for various Institutions/ utilities in e-learning mode.
- NPTI is well known established premier organisation and Apex body serving Indian power sector more than five decades for the development of Human Resource. NPTI is having largest network in the sector by it's alumni.
- Designing National Training Modules best suited for the sustainability of Power sector Manufacturing units and Utilities.
- Customized Course Design based on Power Sector changing requirements.

- Capacity Assessment , Certification and Evaluation of existing technical work force for recommendation to Promotion
- Up-gradation/Creation of Training Facilities within India and abroad.

4.65 The following is the details of the budgetary allocation for NPTI during the last five years and its actual utilization:

(Rs. in lakh)

Year	BE	RE	Utilization	Remarks (reasons for variation)
2014-15	6692.00	1910.00	1529.00	I. Against the BE Rs 965.00 Lakhs for renovation and modernization of Nine Institutes Rs.450.00 Lakhs was approved at the RE Stage against which Rs. 366.89 Lakhs could be utilized and an amount of Rs. 83.11 Lakhs was surrendered due to non finalization of contracts by POWERGRID & NTPC. II. Rs. 890.00 Lakhs was sanctioned for Kerala Institute in the BE against which Rs. 220.00 Lakhs was approved in the RE. Whereas amount could not be utilized due to delay in awarding the work by POWERGRID for non responsive bids. III. Rs.160.00 Lakhs was sanctioned in the BE for shivpuri M.P. whereas no fund was approved in RE and no grant was received due to non finalization of contracts by POWERGRID & NTPC. IV. Against sanctioned revised estimate of Rs. 300.00 Lakhs in

				the old scheme for modernization and up gradation of training facilities at Corporate Office, Faridabad Rs.222.50 Lakhs could be utilized and balance of Rs.77.50 Lakhs remain unspent due to non completion of 800 MW Simulator work being executed through NTPC/BHEL.
2015-16	4640.00	3700.00	3000.00	Rs.4640.00 lakhs was approved in BE against which Rs..3700.00 lakhs was sanctioned at the RE stage. Rs.3000.00 lakhs could only be utilized due to the following reason: ✓ Rs.600.00 lakhs could not be utilized for Kerala Scheme due to delay in awarding the work by POWERGRID for non responsive bids. ✓ Rs.100.00 lakhs could not be utilized due to delay in awarding of work by POWERGRID for PSTI, HLTC and Neyveli. Work for Computerization was also not awarded for nine Institutes by IT department POWERGRID.
2016-17	4040.00	4040.00	4040.00	No variation
2017-18	5720.00	5720.00	5720.00	No variation
2018-19	10055.00	10055.00	10055.00	No variation
2019-20	6900.00			No Grant-in-aids has been received upto 30th September, 2019 against the budget allocation of the F.Y 2019-20.

4.66 In regard to demand of funds and its allocation the following was submitted:

> "An amount of Rs. 132.36 crore was demanded at RE Stage for Financial year 2018-19, whereas Rs.100.55 crore was sanctioned.
> - In the year 2017-18 an amount of Rs. 107.60 crore was proposed at RE stage, whereas Rs. 57.20 crore was sanctioned.
> - An amount of Rs. 45.40 crore was proposed at RE stage in the financial year 2016-17, whereas Rs. 40.40 crore was sanctioned."

4.67 When the Committee enquired about the measure being taken to ensure that sufficient fund is allocated to NPTI and the same is optimally utilized, it has been stated as under:

> "The fund was released keeping in view the demand submitted by NPTI and submission of utilization certificate against the fund released earlier. In this context it is submitted that the release of fund may please be made as per the Fund Flow requirement of the schemes to ensure its timely completion."

4.68 In reply to the query of the Committee about the constraints being faced by NPTI in achievement of its objectives and how it can be made more effective, the following note has been furnished:

> "National Power Training Institute (NPTI) is an Apex Body for Training to Energy Sector and also given mandate by Standing Committee on Energy for R&D activities in upcoming thrust areas relevant to the country's power sector growth. NPTI can be more effective if Ministry of Power may establish linkage with the Utilities/Industries within India and abroad for training the existing technical workforce/managerial personnel for resolving the challenges and improving the efficiency of respective organisations. It may be noted that NPTI needs funding support to run the Institutes on self-sustainable basis through clear-cut policy and guidelines given by Ministry of Power. The Standing Committee on Energy may evolve a methodology for NPTI in order to optimally utilize the infrastructure existing and in-house capability including resource

personnel empanelled for the power sector in the interest of the country, which will not only benefit the industries/power sector but also may be very beneficial for enhancing the upcoming requirements and related expertise for the growth of the Utilities. NPTI needs financial support to cater Indian Power Sector requirements which are dynamically changing with technology integration.

Further, Government of India, Ministry of Power and State Governments may work as facilitator. The respective Utilities/Industries of the concerned State has to formally adopt the policy of training on regular basis not only for technical upgradation but also for changing the mind-set of working personnel for betterment of respective organisations excellence. Since NPTI has huge infrastructure having 11 Institutes, the infrastructure can be effectively utilized by the respective zones/states of the country for not only getting the adequate technology upgradation but also the academic organisations and R&D Institutions can get the benefit of industry association thus providing training to all the technical workforce/managerial personnel which may include ITIs/Diploma Holders/Engineering Institutes and even Higher Academic Institutes where this type of infrastructure is not available. The funding mode of NPTI to establish the adequate training infrastructure and to meet the upcoming requirements such as Electric Vehicle Charging Infrastructure, Smart Metering and IoT based technology integration in Renewable Energy Sector and Smart cities can be properly included in existing framework by Standing Committee on Energy. This may not only give value addition to NPTI infrastructure but also prove to be turning point for organisations and industries as well.

Moreover, academic institutions in India are working in general off-line mode as far as primary concept of education is concerned. NPTI may facilitate higher academic institutions, if properly funding is made, by giving focused training to enhance the utility knowledge. Higher Academic Institutions may establish joint Centers of Excellence and make collaboration with NPTI which may not only facilitate the appropriate delivery of manpower to the Utilities/Industries, but also may create innovative thought process for training and collaborative R&D activities as envisioned in Mission and Vision 2025 of NPTI as agreed by Governing Council of NPTI."

V. UJJAWAL DISCOMS ASSURANCE YOJANA (UDAY)

5.1 The Ministry have stated that State DISCOMs in the country had huge accumulated losses and outstanding debt. As a result of which financially stressed DISCOMs are not able to supply adequate power at affordable rates, which hampers quality of life and overall economic growth and development. Efforts towards 100% village electrification, 24X7 power supply and clean energy cannot be achieved without performing DISCOMs. Power outages also adversely affect national priorities like "Make in India" and "Digital India". In addition, default on bank loans by financially stressed DISCOMs has the potential to seriously impact the banking sector and the economy at large.

5.2 Accordingly, "UDAY" (Ujwal DISCOM Assurance Yojana), a scheme for financial and operation turnaround of Power Distribution Companies (DISCOMs) was formulated and launched by the Government on 20-11-2015 in consultation with the various stakeholders to ensure a sustainable permanent solution to the problem of legacy of debts and address potential future losses. The scheme also envisages reform measures in all sectors – generation, transmission, distribution, coal, and energy efficiency.

5.3 The Scheme envisages reducing interest burden, cost of power and AT&C losses. Under the scheme, States are to take over 75% of debt of DISCOMs as on 30-09-2015 which would be outside the FRBM limits. The Scheme is operationalized through a bipartite/tripartite agreement amongst the Ministry of Power, State Government and the DISCOMs. The Scheme "UDAY" is optional for all States to join.

5.4 It has been submitted that no budgetary provision is made for this scheme as there in no financial implication on the part of the Government of India.

5.5 In regard to objective and scope of this scheme, it was stated that financial liabilities of DISCOMs are the contingent liabilities of the respective States and need to be recognized as such. Bank loans to DISCOMs are de facto borrowings of States which is not counted in de jure borrowing. Following financial interventions to improve the financial efficiency of DISCOMs have been approved by the Government:

- Empowers DISCOMs with the opportunity to break even in the next 2-3 years through various initiatives.
- Operational efficiency improvements viz. metering, up-gradation of transformers/ other infrastructures, energy efficiency measures like efficient LED bulbs, agricultural pumps, fans & air-conditioners etc. to reduce the average AT&C loss from around 22% to 15%; Elimination of the gap between ACS and ARR by 2018-19.
- Reduction in cost of power through measures such as increased supply of cheaper domestic coal, coal linkage rationalization, liberal coal swaps from inefficient to efficient plants, coal price rationalization based on GCV, supply of washed and crushed coal, and faster completion of transmission lines.

5.6 It was further stated that Financial turnaround through States taking over 75% of DISCOM debt as on 30th Sept, 2015 over two years is envisaged.

- 75% of DISCOM debt to be taken over by 2016-17 – reduction of the interest cost on the debt taken over by the States to around 8-9%, from as high as 14-15%.
- DISCOM debt not taken over by the State shall be converted by the Banks / FIs into loans or bonds with interest rate not more than the bank's base rate plus 0.1%. Alternately, this debt may be fully or partly issued by the DISCOM as State guaranteed DISCOM bonds at the

prevailing market rates which shall be equal to or less than bank base rate plus 0.1%.

- ❖ Further provisions for spreading the financial burden on States over three years to give flexibility in managing interest payment within their fiscal place in initial years.
- ❖ Provision for incentives/ disincentives for future financial performance for participating states.
- ❖ States to take over and fund at least 50% of the future losses (if any) of DISCOMs in a graded manner.
- ❖ State DISCOMs to comply with the Renewable Purchase Obligation (RPO) outstanding since 1stApril, 2012
- ❖ States joining UDAY and performing as per operational milestones will be given additional/priority funding through DDUGJY, IPDS and PSDF or other such schemes of Ministry of Power and Ministry of New and Renewable Energy.
- ❖ Such States shall also be supported with additional coal at notified prices and, in case of availability through higher capacity utilization, low cost power from NTPC and other Central Public Sector Undertakings (CPSUs).
- ❖ States not meeting operational milestones will be liable to forfeit their claim on IPDS and DDUGJY grants.

5.7 In regard to status of participation by the States, the Ministry have informed that so far 27 States and 5 UTs namely Jharkhand, Chhattisgarh, Rajasthan, Uttar Pradesh, Gujarat, Bihar, Punjab, Jammu & Kashmir, Haryana, Himachal Pradesh, Uttarakhand, Goa, Karnataka, Andhra Pradesh, Manipur, Madhya Pradesh, Maharashtra, Assam, Sikkim, Meghalaya, Telangana, Tamil Nadu, Arunachal Pradesh, Kerala, Tripura, Mizoram, Nagaland, Andaman & Nicobar Islands, Dadra & Nagar Haveli, Daman & Diu, Puducherry

and Lakshadweep have signed Memorandum of understanding under UDAY. While 16 States have signed comprehensive MoU which includes financial restructuring of debt, other 16 States/UT have signed the MoU only for operational improvements.

5.8 States of West Bengal and Odisha and Union Territories (UTs) of Delhi and Chandigarh have not joined the scheme. In the case of West Bengal, the state had proposed its own scheme, which was a significant departure from UDAY. State of Odisha and UT of Delhi have Private owned DISCOMs, whereas the scheme was designed only for state owned Distribution Companies (DISCOMs).

5.9 In regard to issuance of bonds the Ministry have stated that Under UDAY, States are to take-over 75% of DISCOM debt and balance 25% are to be restructured/replaced by DISCOM Bonds at lower rates. Total debt of UDAY states as on 30.09.2015 was of the order of Rs. 3.82 lac crores. As informed above, 16 states have opted for financial restructuring, wherein debt of Rs.2.69 lac crores were sought to be addressed (3 states i.e. Maharashtra. A.P. & Tamil Nadu have opted for restructuring of only a part of their debt). Out of the above, total of Rs. 2.32 lac crores of Bonds have so far been issued (87% of UDAY states debt to be addressed) consisting of States Bonds of Rs. 2.09 lac crores and DISCOMs Bonds of Rs. 0.23 lac crores. DISCOM Bonds worth Rs. 0.37 lac crores are yet to be issued.

5.10 On being asked by the Committee the Ministry have provide the following information regarding performance in major financial parameters in Financial Years - 2016 to 2019:

Financial Parameters	FY16	FY17	FY18	Increase/ Decrease	FY19*
Loss (~Rs. Cr.)	(51562)	(38080)	(15132)	⇩	(28036)
ACS-ARR Gap (Rs./kWh)	0.60	0.42	0.17	⇩	0.27
Collection Efficiency (%)	97.09%	96.20%	96.84%	⇧	97.03%
Billing Efficiency (%)	81.57%	82.88%	83.86%	⇧	84.31%
AT&C Losses (%)	20.81%	20.28%	18.80%	⇧	18.19%
Power Purchase Cost (Rs./kWh)	4.22	4.22	4.19	⇩	4.42

(The progress shown above is based on provisional / unaudited data entered by States /DISCOMs on UDAY portal during respective years/quarters, which may vary from the year-end audited figures. The portal dynamically captures data as and when uploaded by States and remained unchanged).

****AT&C and ACS-ARR GAP for Q4FY19 data is based on data submitted by 28 states, P&L Q4FY19 data is based on data submitted by 27 states, rest of the data being picked up from Q3FY19 or latest available data on UDAY portal.(As on 27-Sep-2019).(Since last report, one more state data i.e. Mizoram has now been included in this report.)***

5.11 They have also provided following information regarding performance in major operational parameters:

Operational efficiency indicators	Target till Mar'19	Achievement till Mar'19	Cumulative % achievement
Urban Feeder Metering	48,524	48,524	100%
Rural Feeder Metering	1,14,951	1,14,951	100%
UJALA (in lacs)	2805.79	2805.79	100%
DT Metering Urban	13,81,852	10,42,050	75%
Feeder Segregation	63,197	46,097	73%
DT Metering Rural	45,08,325	25,97,455	58%

5.12 The State wise details of AT&C losses, ACS-ARR Gap and Profit & Loss as furnished by the Ministry are at **Annexure – III, Annexure – IV and Annexure – V** respectively.

5.13 In regard to important achievements during UDAY period, the Ministry have enumerated the following points:

- ✓ **AT&C loss reduction:** From **20.81%** in FY 16 to **20.28%** in FY 17 and to **18.80%** in FY18 has further improved to **18.19%** in FY19 (Data updation still in process on UDAY portal).
- ✓ **20 States reduced AT&C losses** in FY19 as compared to FY16.
- ✓ Billing efficiency has improved from **81.57% in FY 16 to 82.88% in FY17 to 83.86% in FY18 and further improved to 84.31% in FY19.**
- ✓ **Increase in billed energy: 10% increase** in FY17 over FY16,~**7% increase** in FY18 over FY17 and **~6% increase** in FY19 over FY18.
- ✓ **ACS-ARR gap reduction: Reduced from Rs.0.60 /kWh in FY16to Rs.0.42/kWh in FY17** to ₹**0.17/kWh** in FY18 but has deteriorated to **Rs.0.27**/kWh in FY19 (Data updation still in process on UDAY portal).
- ✓ **18 States have reduced ACS-ARR GAP** in FY19 as compared to FY16.
- ✓ **Power purchase cost reduction:** Power purchase costs are almost 80-85% of DISCOM costs. Special interventions done to reduce the cost of power.
- ✓ **Book losses** of Discoms have reduced from **₹51,562Crore** in FY 16 to **₹ 38,080Crore** in FY17 to **₹ 15,132 Crore** in FY 18.During FY19 the losses have increased to **₹ 28,036 Crores** (Data updation still in process on UDAY portal). Total **10 states** have shown **positive trends** of either reducing losses or have shown profits in FY19.
- ✓ Provisional figures based on unaudited accounts (as submitted on UDAY portal) indicate that 8 States namely Gujarat, Haryana, Dadar & Nagar Haveli, Karnataka, Goa, Himachal Pradesh, Maharashtra and Rajasthan have shown profits during FY19. In FY17, only 4 states have shown book profits.
- ✓ Urban Feeder Metering, Rural Feeder Metering and UJALA – LED Distributions target has been achieved 100%. This is commendable as this has improved the operational efficiency.

5.14 When the Committee desired to know about the efforts of the Central Government to make UDAY scheme successful, the Ministry in their written reply haves submitted as under:

> "Time-bound targets in Memorandum of Understanding (MoU) for UDAY:
> UDAY has comprehensive as well as operational MoUs which contain time-bound targets for key operational and financial parameters of utilities. The comprehensive MoUs include financial as well as operational parameters whereas operational MoU include only the operational parameters of the utilities.
> Reduction of interest burden on utilities through issuance of bonds:
> Bonds are being issued by respective state governments to take-over the debt of the utilities in phased manner and also, bonds are being issued by utilities to reduce their own debt interest rates. As on 31st March, 2017, 15 states have issued bonds worth ₹ 2.09 lakh Cr. and utilities have so far issued bonds worth ₹ 0.24 lakh Cr. Total bonds issued is ₹ 2.32 lakh Cr. The interest outgo has been reduced by ~3 percentage point (approx.)
> • Bringing financial discipline in working of utilities:
> Working capital loans through Bank/FIs have been restricted to 25% of the previous year's annual revenue, thereby promoting discipline and sense of responsibility among utilities for loss reduction. No loss funding are permitted through Banks/FIs. DISCOMs can raise operational funding within the trajectory agreed with MoP through state backed Bonds or State may issue Bonds and lend to DISCOMs.
> • Emphasis on key operational parameters:
> UDAY monitors and obligates utilities to act on operational parameters which are crucial to utilities' turnaround. Such parameters include AT&C losses, Billing efficiency, Collection efficiency, Feeder metering, Feeder audit, DT metering, Smart metering, Power purchase cost, Tariff revisions, payables, receivables and LED lighting.
> • Detailed action-plans for achieving the MoU targets:
> Utilities are tasked to prepare and follow detailed action plans to achieve their MoU obligations in a time-bound manner. Many utilities have already prepared such detailed action plans.
> • Web Portal and Mobile App for data-flow and transparency:
> UDAY scheme is monitored under a state-of-the-art portal and mobile app, where there is seamless integration of DISCOM data presented through

financial and operational indicators. There are state/DISCOM health card and improvement barometers indicating performance against targets. UDAY states/DISCOMs are also ranked as per their quarterly performance and presented on the dashboard.

- Focused analysis of utilities' quarterly, half-yearly and annual performances:

Reports have been prepared having detailed analysis of utilities performances on UDAY parameters. The reports highlight deviations from targets, seek explanations and suggest ways of course corrections

- State-visits by Ministry of Power and their representatives:

Senior officers from Ministry of Power have visited UDAY participating states and utilities to understand their concerns and to offer support to them.

- Appointment of nodal officers from utilities for coordinating the UDAY program:

Nodal officers from utilities are appointed to ensure that the utilities are continuously made aware of their obligations under UDAY and the communication with utilities are sustained

- Enhanced involvement of state governments in turnaround of utilities:

Some of the key state government responsibilities such as timely subsidy disbursement, ensuring zero outstanding dues by departments of state government, enabling tariff-revisions form a part of UDAY MoU and are being strictly monitored under UDAY. State governments are issuing bonds to take over the losses of utilities and they hold regular review meeting at their level to monitor the progress under UDAY. State governments are increasingly being made aware of their responsibilities to reduce AT&C losses & prevent electricity thefts

- Capacity building of utilities:

Workshops are being organized under UDAY on relevant topics to bring together the practitioners on a common platform for sharing their challenges, best practices and plan ahead. First workshop was organized on AT&C loss reduction on 19th September 2017 under the chairmanship of Hon'ble Secretary, MoP by second workshop on 12 December 2017 on the topic of Power Portfolio Optimization and third workshop was organized on 09 January 2018 in Guwahati on AT&C loss reduction.

Handholding in State owned Power Plants is being carried out by NTPC for improvement in operational efficiencies.

- Monitoring committee meetings under the chairmanship of Secretary, MoP:

UDAY has three-tier monitoring and review structure at utility, state and the central level respectively. At central level, regular monitoring committee reviews are held under the chairmanship of Secretary (Power). Apart from Secretary (Power), the committee consists of Joint Secretary (Distribution), State Power secretaries, MD/CMD of DISCOMs, representatives from Ministry of Coal, MNRE, Power CPSUs, RBI etc. In these meeting, progress of UDAY along with key issues and impediments are discussed."

5.15 In regard to losses made by the Discoms, the Secretary Power has deposed before the Committee as under"

"The big issue is, as you rightly noted, in the distribution segment. The distribution still is, by and large, in the public hands. The cost of power which they generate and buy is much more than the realisations which they make from their consumers. Various estimates suggest that today close to Rs. 1.5 lakh crore of the gap exists between the cost of supply and the bills which they realise from the consumers. This has created stress in the past and this continues to create stress today also. This, from time to time, essentially falls on the State Governments. They also regularly provide assistance to the power sector. Last year also, close to Rs. 85,000-90,000 crore of support was given by the State Governments to distribution utilities. Still, the gap remained. That gap leads to further stresses. The distribution utilities are not able to pay. They delay the bills of everyone – private sector and public sector – and the situation is that while UDAY provided some relief from these accumulated liabilities when it was launched in 2015, but by the time the last year came, there was again that kind of stress or bills were not being paid. Even until July, there were Rs. 57,000 crore of unpaid bills."

5.16 While elaborating the remedial measures being taken by the Government to address the issue of outstanding dues, the Secretary Power has deposed as under:

"That made the Government to come up with a disciplining measure. It was made compulsory that no power will be scheduled unless the State utilities are able to provide the LC in advance or make payment in advance. That has brought some discipline and the current dues are being paid. This is the month when the first set of bills was issued after which disciplining mechanism will come into the period when they pay for it. We are watching this very carefully. Hopefully, the current bills will not see

the stress, but there are some points where the stress is there, especially in the renewable and the private sector and some of the PSUs also. We are very confident that the current bills will be paid. We will have to design some way to get Rs. 56,000-57,000 crores of accumulated liabilities."

5.17 While explaining the role of Central Government in providing assistance to Discoms, the Secretary Power has stated as under:

> "The Central Government did not provide any loan to the DISCOMs. The financial institutions had already given loans. Those loans were restructured at lower rates of interest. That was the incentive provided to DISCOMs by the banks, PFC and the REC. The State Governments took most of the responsibility by taking over those debts on their books by issuing new bonds. The expectation was that if you bring down the T&D losses and revise the tariffs from time to time, the situation would be better."

5.18 The Committee pointed about the Discoms have revised the tariff to the tune of 7%, and AT&C losses have also came down and desired to know as to why the losses are still increasing. The Secretary Power replied as under:

> "Many States which were in big stress did not actually revise the tariffs, or if they revised at once, they did not follow through, for example, the States like Rajasthan and Tamil Nadu. So, they did not come up. The losses which were expected to come down to something like 15 per cent also have not come down to 15 per cent. Some debt was not even restructured. So, as a result, the latest number suggests that again, a lot of working capital loans have got accumulated in the DISCOMs, and that is what is causing the stress in the form of non-payment of bills."

5.19 The Secretary Power while replying to the issue of subsidy, further elaborated the gravity of financial distress in Distribution Sector, as under:

> "The Central Government does not give subsidy directly. It is basically the State Governments which give the subsidy. So, last year, as the data is available, the States provided something close to Rs. 88,000 crore to Rs. 89,000 crore, all put together, basically to cover the subsidised agriculture, residential power, and to some extent, the other losses. So,

this is a very large amount. The States are putting in a lot of money. In fact, now, the stress of the power sector is shifting to the State's own finances. The ratio of the interest payment to their revenue has started going up now, and the States are finding it more and more difficult to provide them money but they have no choice. It is their own entity. So, either they take steps to do a franchise, privatise or raise the tariff. This disciplining measure which has been taken, the central objective for it is also to force the States to take up the right kind of decisions. You cannot postpone forever, the non-payment or partial payment of bills."

5.20 In regard to a specific query of the Committee that whether the objective of UDAY i.e. restores the financial viability of the Discoms has been achieved, the Secretary Power explained the it as under:

"How do we assess whether that objective was achieved or not. If we want to go for one single indicator as to whether the DISCOMS have come into profit or there are no losses, this is measured in different ways, for example, by seeing the average cost of supply, the average cost of revenue, whether the gap has reduced to zero or not, and whether the transmission and distribution losses are reduced or not. So, if we look at one number whether the profits have increased or the financial losses have disappeared, it came down from about Rs. 56,000 crore to something like Rs. 15,000 crore. But since the last year, it has again started going up. So, it never became zero."

5.21 When the Committee desired to know whether any changes are required in UDAY scheme to make it more effective in improving the financial distress of the Discoms, the Secretary Power has deposed as under:

"As I said, the primary reason is that the States are not collecting the full cost which they pay. This is going to lead to the new scheme which is being envisaged as a kind of replacement for UDAY. That broad thinking is only available at this stage. There is no specific outline of the scheme. The Minister has also spoken in the public about this. Basically, the contour of that scheme is that you reform yourself to get to a situation where your deficit does not get increased. If you can do it, retaining in the public sector, it is fair enough; otherwise, try out different models like franchise, PPP etc. If you take those steps and the further haemorrhage in the system gets reduced, we back it up by providing some grant support from the Central Government. That scheme is being worked out. There is a

group headed by the Special Secretary which is going into this. We are proposing an allocation to be made on this in the new Demands for Grant. By the time these get finalised, we should be able to finalise further details of the scheme."

VI. DEVELOPMENT OF POWER SECTOR

6.1 The following is the All India Installed Capacity (MW) Sector-wise as on 30.09.2019:

Sector	Thermal					Nuclear	Hydro	RES*	Grand Total
	Coal	Lignite	Gas	Diesel	Total				
State	65061.50	1290.00	7118.71	236.01	73706.21	0.00	26958.50	2349.98	103014.69
Private	74173.00	1830.00	10580.60	273.70	86857.30	0.00	3394.00	78606.67	168857.97
Central	57660.00	3140.00	7237.91	0.00	68037.91	6780.00	15046.72	1632.30	91496.93
All India	196894.50	6260.00	24937.22	509.71	228601.42	6780.00	45399.22	82588.95	363369.59

6.2 The Actual Power Supply Position in the country during the last five (5) years in terms of Energy (BU) and Peak (MW) is given in following Table:

Year	Energy				Peak			
	Energy Requirement	Energy Supplied	Energy Not Supplied		Peak Demand	Peak Met	Demand Not Met	
	(BU)	(BU)	(BU)	%	(MW)	(MW)	(MW)	%
2014-15	1,068.9	1,030.8	38.1	3.6	148,166	141,160	7,006	4.7
2015-16	1,114.4	1,090.8	23.6	2.1	153,366	148,463	4,903	3.2
2016-17	1,142.9	1,135.3	7.6	0.7	159,542	156,934	2,608	1.6
2017-18	1,213.3	1,204.7	8.6	0.7	164,066	160,752	3,314	2.0
2018-19	1,274.6	1,267.5	7.1	0.6	177,022	175,528	1,494	0.8

6.3 When the Committee desired to know the present demand and supply position of power in the Country, the Ministry have provided the following information:

"The Power Supply Position in the country during the current year 2019-20 (upto August, 2019) in terms of Energy and Peak is given in following table:

Year	Energy				Peak			
	Energy Requirement	Energy Supplied	Energy Not Supplied		Peak Demand	Peak Met	Demand Not Met	
	(BU)	(BU)	(BU)	%	(MW)	(MW)	(MW)	%
2019-20 (upto Aug,2019)*	577.9	575.2	2.7	0.5	183,804	182,533	1,271	0.7

* Provisional Data

6.4 When the Committee pointed out the shortages, the Ministry have stated that it has been observed that despite availability of adequate power in the country, there is a marginal mismatch in demand and supply of power in various States/ UTs of the country. The Ministry have stated that this demand–supply gap are constraints in sub-transmission and distribution network, commercial reasons, financial constraints of State utilities, etc.

6.5 In regard to anticipated demand and supply of power position five years from now, the Ministry have stated that Planning of generation capacity addition is carried out keeping in view no demand and supply gap. Central Electricity Authority (CEA) conducts periodic Electric Power Survey (EPS) of the country to assess the state-wise/UT-wise/region-wise and all India electricity demand on medium term and long-term basis. So

far 19 (nineteen) EPS has been conducted and the report of 19th EPS was published in January 2017. The 19th EPS report covers electricity demand projection for the year 2016-17 to 2026-27 as well as perspective electricity demand projection for the year 2031-32 and 2036-37 for each state/UTs.

6.6 The demand projection of the country in term of Electrical Energy Requirement (in Billion Units) and Peak Demand (in MW) of the country for next 05 years from 2020-21 to 2024-25 as per 19th EPS is as under:

Year	Energy Requirement (in Billion Unit)	Peak Demand(in MW)
2020-21	1483.26	213244
2021-22	1566.02	225751
2022-23	1650.59	238899
2023-24	1739.62	252288
2024-25	1836.00	266844

6.7 In reply to the query of the Committee about the preparation of the Government to meet the projected demand, the Ministry have enumerated the followings:

- The conventional capacity of about 63,565.64 MW at various stages of construction and is likely to benefit during 2019-24.
- Government of India also assists the States/UTs by allocating power from Central Generating Stations (CGSs). State can also purchase power through various market mechanisms including power exchanges to meet any gap in demand and supply.
- Extensive monitoring of under construction projects by Central Electricity Authority.

6.8 When the Committee raised the issue of Stress/Non-Performing Assets (NPA) in Power Sector and desired to know it present situation, the Ministry have furnished the following note:

> "A meeting was held in the Cabinet Secretariat on 09.03.2017 to examine issues relating to financial stress in select sectors. Thereafter, Department of Financial Services (DFS) sent a list of stressed projects in the power sector on 22.03.17. The 34 non-captive coal based power projects mentioned in the DFS list are mostly private and have a total installed capacity of 40,130 MW.
>
> - Subsequently, the Government of India constituted a High Level Empowered Committee (HLEC) under the Chairmanship of Cabinet Secretary to address the issues of stressed thermal power projects on 29.07.18. The HLEC held its meetings on 31.08.18, 14.09.18, 28.09.18 and 06.11.18 and submitted its report on 12.11.18. The report was further discussed and was also placed in the public domain on the website of Ministry of Power.
> - The Government then constituted a Group of Ministers (GoM) to examine the specific recommendations of HLEC and forward their comments for consideration of the Cabinet. The GoM held its meetings on 02.01.19 and 25.02.19 and gave its recommendations. The recommendations of the GoM were then forwarded for the approval of the Cabinet Committee on Economic Affairs (CCEA).
> - CCEA in its meeting dated 07.03.2019 approved the Ministry of Power's Note on the recommendations of Group of Ministers (GoM). In this regard, the MoP vide OM dated 08.03.2019 circulated the approval of the Government."

6.9 It was further stated that presently, Ministry of Power is monitoring 34 stressed assets in thermal power sector, as per list provided by Department of Financial Services. As per the information received from various agencies, out of the total installed capacity of these 34 projects i.e. 40,130 MW, 26,265 MW is commissioned. Out of the total capacity, 19,005 MW capacity has PPA and 25,702 MW has fuel linkage. Current classification of 34 stressed assets is as follows:

i. **Category I:** Projects which are mostly commissioned and have been resolved/ likely to be resolved and/or serving their debt and/or are not in NCLT. A total of 17 projects come under this category. 11 out of 17 of these projects have already been resolved.

ii. **Category II:** Projects which are only partly commissioned & have been referred to or admitted under NCLT waiting for resolution. A total of 11 projects come under this category.

iii. **Category III:** Projects which are at very initial stage of construction and are totally stalled. Such projects have either been ordered to be liquidated or are heading towards liquidation. A total of 6 projects come under this category.

Status of the stressed projects								
S. N	**Developer /Project**	**State**	**Lead Bank**	**Total**	**Com missd**	**PPA tied**	**Fuel tied**	**O/S Debt****
I	**Projects resolved/ Likely to be resolved**							
	Resolved							
1	DVC/Raghunathpur	W Bengal	PFC	1200	1200	654	1200	1842
2	NTPC/Muzaffarpur	Bihar	SBI	390	390	390	390	2506
3	Adani/ Tiroda	Maharashtra	SBI	3300	3300	3300	3300	11765
4	Adhunik Power Adhunik	Jharkhand	SBI	540	540	354	540	2474
5	GMR/Kamalanga	Odisha	IDFC	1050	1050	885	1050	4172
6	GMR/ EMCO Waroa	Maharashtra	SBI	600	600	600	600	3012
7	DB Power/ Baradhara	Chhattisgarh	SBI	1200	1200	576	600	5834
8	Avantha/ Korba West (Thapar group)	Chhattisgarh	AXIS	600	600	30	600	3786
9	Lanco/ Anpara 'C'	U.P.	REC	1200	1200	1200	1200	2457
10	GMR /Raikheda	Chhattisgarh	AXIS	1370	1370	0	0	6305
11	SKS/ Binjkote	Chhattisgarh	SBI	1200	600	330	850	5391
	Likely to be Resolved							
12	Jaypee /Bina MP	MP	IDBI	500	500	350	500	1593
13	Jaypee/ Nigrie $	M.P.	ICICI	1320	1320	495	660	6448
14	RKM/Ucchpinda	Chhattisgarh	PFC	1440	1440	1293	900	9289
15	Essar/ Mahan	M.P.	ICICI	1200	1200	255	0	5984

16	Jaypee/ Bara (Prayagraj)	U.P.	SBI	1980	1980	1782	1782	11083
17	Rattan Power/ Nashik -I	Maharashtra	PFC	1350	1350	0	986	7118
	Total			**20440**	**19840**	**12494**	**15158**	**91059**
II	**Projects which can be resolved (under NCLT or outside)**							
1	GVK/Goindwal Sahib $	Punjab	IDBI	540	540	540	540	3523
2	Coastal Energen/ Mutiara$	Tamil Nadu	SBI	1200	1200	558	1200	6483
3	JITPL/ Derang $	Odisha	PNB	1200	1200	903	600	5507
4	KSK Mahanadi-Akaltara $ Unit	Chhattisgarh	PFC	3600	1800	2274	2400	18750
5	Madhucon/Simhapuri $	Andhra pradesh	SBI	600	600	0	600	2608
6	Lanco/ Vidarbh*$	Maharashtra	PNB	1320	0	0	1097	4762
7	Lanco /Amarkantak@	Chhattisgarh	PFC	1320	0	0	1320	9003
8	KVK/ Nilanchal *@	Odisha	PFC	1050	0	88	311	1062
9	Ind Barath Utkal@ (promotor R Raghu)	Odisha	PFC	700	350	584	616	4893
10	Avantha/ Seoni Jhabua @ (Case -1 project)	MP	AXIS	600	600	425	600	4255
11	Athena/Singhtrai U-1&2@	Chhattisgarh	SBI	1200	0	0	600	7086
	TOTAL			**13330**	**6290**	**5372**	**9884**	**67932**
III	**Projects unlikely to be resolved (heading for liquidation)**							
1	Vandana/ Salora@	Chhattisgarh	PNB	270	135	0	0	2816
2	Monnet /Malibrahmani*@ (stalled but good progress)	Orissa	IDFC	1050	0	262	0	5874
3	Essar /Tori *@	Jharkhand	ICICI	1200	0	877	0	3650
4	Lanco/Babandh U-	Odisha	ICICI	1320	0	0	660	8217

	1&2*@							
5	Visa/ Deveri *@	Chhattisgarh	PNB	1200	0	0	0	1481
6	Athena (EastCost) *@/ Bhavanpadu*	AP	PFC	1320	0	0	0	4906
	Total			**6360**	**135**	**1139**	**660**	**26944**
	Grand total			**40,130**	**26,265**	**19,005**	**25,702**	**1,85935**

*Stalled projects verified by CEA

**Outstanding debt as compiled by lead banks and SBICAPs in INR Crore

Outstanding debt as per claims admitted in NCLT

@ In NCLT; $- Referred to NCLT

N.B. The above data is prepared from various sources & hence tentative/ subject to verification.

6.10 When the Committee asked about the steps taken by the Government to resolve the stress in the Power Sector, the Ministry have enumerated the following points:

"**Action taken on CCEA/Govt. approval dated 08.03.2019**

i. Amendment in Shakti Policy issued on 25.03.2019 which allowed the following:

a. Coal Linkage for short term sale of power: All such power plants including private generators which do not have PPAs, shall be allowed Coal linkage under B(iii) and B(iv) of Shakti Policy for a period of minimum 3 months upto a maximum of 1 year, provided further that the power generated through that linkage is sold in Day Ahead Market (DAM) through power exchanges or in short term through a transparent bidding process through Discovery of Efficient Energy Price (DEEP) portal. A methodology in this regard is being issued.

b. Continued usage of linkage coal for short term sale of power in case of termination of PPAs due to payment default by DISCOMs: A generator which terminates PPA in case of default in payment by the DISCOM, may be allowed to use existing linkage coal for sale of power through short-term PPAs using DEEP portal or power exchange for a period of maximum 2 years or until they find another buyer of power under long/medium term PPA whichever is earlier. Adequate safeguards, in this regard, have been issued on 30.08.2019.

c. **Procurement of bulk power by a nodal agency against pre-declared linkages:** The provision of para B(v) of Shakti Policy above shall also be applicable in cases where the nodal agency designated by Ministry of Power aggregates/ procures the power requirement for a group of states even without requisition from such states. In this regard, Ministry of Power has designated PFC as the nodal agency. SLC (LT) in its meeting held on 24.06.2019 has recommended for grant of linkage (around 10MT/annum) from CIL under para B (v) of SHAKTI policy.

d. **Central and State generating companies can act as an aggregator of power** of such stressed power assets and procure it through transparent bidding process and offer that power to the DISCOM against their existing PPAs to such DISCOMS, till such time their own plants get commissioned. Central and State generating companies may use the existing unutilized Bridge Linkages for such stressed power assets provided they meet other parameters of tolling guidelines including competitive bidding. Advisory issued to the States and NTPC on 03.06.2019.

e. **Mechanism to ensure that net surplus generated by the developers, shall be entirely used for servicing debt in the first place**, has been issued on 05.08.2019 and Corrigendum issued on 20.08.2019.

f. **Projects with long term PPA and who could not participate in first round of linkage auctions under B(ii) of SHAKTI to be allowed to participate in subsequent rounds**.

g. **Projects which participated in first round of linkage auctions under B(ii) of SHAKTI but could not secure linkage for full ACQ quantum to be allowed to obtain linkage for balance quantity** under subsequent rounds. Two meetings of the Inter Ministerial Committee (IMC) held on 06.09.2019 & 16.09.2019. Ministry of Power forwarded its comments on 25.09.2019 on the minutes of the first meeting of the IMC. The 3rd meeting of the IMC is scheduled on 14.10.2019.

h. **Auctions to be held at regular intervals**. A methodology in this regard is being issued.

ii. **Increase in quantity of coal under e-auction for power sector:** MoC vide OM dated 25.03.2019 has issued an advisory to Coal India Limited for earmarking of at least 50% of the total coal meant for e-auction for power sector. CIL intends to offer 10% of its targeted production of 660 million tons in 2019-20 through e-auction and out of which 50% of the quantity i.e. 33 million tons is planned to be offered under Special Forward e-Auction. An annual auction calendar has been put on the CIL website as well.

iii. **Methodology for non-lapsing of short supplies of coal** has been issued on 19.08.2019 and Standard Operating Procedure issued by CIL on 18.09.2019.

iv. **ACQ to be determined based on efficiency**. CEA issued new coal consumption norms on 27.03.2019 w.e.f. 01.04.2019. CIL vide letter dated 06.09.2019 notified the revised normative quantity plant wise.

v. CERC and Forum of Regulators have been requested on 25.03.2019 to **mandate that the Late Payment Surcharge (LPS)** be paid in case of delay in payment by DISCOMs as per the provisions of PPA.

vi. Advisory issued to the States, PGCIL and MoEF&CC on 04.06.2019 that **PPA/FSA/Transmission connectivity/EC/FC/Water etc. not be cancelled if project is referred to NCLT** or is acquired by another entity.

vii. Advisory issued to the States on 24.04.2019 that **PPA not be cancelled in case of delay in commissioning of project for reasons not attributable to the generator**.

- **Fuel linkages under SHAKTI:**

The government has approved a new coal linkage allocation policy on May 17, 2017 named SHAKTI (Scheme for harnessing & allocating koyla transparently in India). Under the scheme, auction for coal linkages under B(ii) for Independent Power Producers (IPPs) with PPAs without linkage was conducted on September 12, 2017. Linkages were granted to 11549 MW capacity (10 projects) including five stressed projects of total 8490 MW capacity. Second round of B(ii) auction concluded by CIL on 24.05.2019. Letters of linkages to successful bidders have

been issued on 10.07.2019. Quantity of 2.97 MTPA has been booked by 8 bidders.

- **Pilot project for procurement of 2500 MW power:**

In order to address the problem of lack of Power Purchase Agreements (PPAs) in the country, the Ministry of Power had notified a scheme for procurement of 2500 MW on competitive basis for a period of 3 years from the generators with commissioned projects having untied capacity. Bids received from 7 (seven) projects for aggregate power of 1900 MW. Letter of Award (LOA) was issued to all the successful bidders (1900 MW).

Under Pilot-II:- 15 Bidders were declared qualified for bidding matching the Tariff of Rs. 4.41/kWh for aggregated power of 2500 MW.

- **Ministry issued an order on 28.06.2019 and subsequent corrigendum thereon 17.07.2019** regarding **opening and maintaining of adequate Letter of Credit (LC) as payment security mechanism** under PPAs by Distribution Licensees. Vide the order, NLDC & RLDC have been directed to despatch power only after it is intimated by the Generating Company and /Distribution Companies that a Letter of Credit for the desired quantum of power has been opened and to made available the copies to the concerned Generating Company.

- Ministry issued direction to CERC under 107 of The Electricity Act, 2003 on 30th May 2018 **that the additional cost implication due to installation of up-gradation of various emission control systems and its operational cost** to meet the new environment norms, after award of bid or signing of PPA as the case may be, shall be considered for being made pass through in tariff. Further MoP vide letter dated 07.12.2018 and its amendment dated 30.07.2019 to CERC clarified that the impact of operating costs incurred in the implementation of new Environmental Norms shall not be considered for Merit Order Despatch of Coal Based Thermal Power Stations till 31.12.2022.

- Ministry issued direction to CERC under section 107 of The Electricity Act, 2003 on 27.08.2018 for allowing pass-through of any change in domestic duties, levies, cess and taxes imposed by Central Government, State Government/Union Territories or by any Government instrumentally leading to corresponding changes in the cost, may be treated as "Change in Law" and may unless provided otherwise in the PPA, be allowed as pass through. The order of pass through giving the calculation of per unit impact will

be issued within 1 month of filing petition. Where CERC has already passed an order to allow pass through of changes in domestic duties, levies, cess and taxes in any case under the Change-in-law, this will apply to all cases ipso facto and no additional petition would need to be filed in this regard.

- Flexible Utilisation of Coal Linkage: States have been impressed upon to make use of the policy of flexibility in utilisation of domestic coal for reducing the cost of power generation i.e. use of linkage coal of State Gencos in IPPs & get cheaper power generated from such coal. Under this scheme, GMR Chhattisgarh Energy Ltd. (GCEL) supplied power to GUVNL (Gujarat Urja Vikas Nigam Ltd) in lieu of coal linkage to GSECL (Gujarat State Electricity Corporation Ltd.) with a tariff of 2.81 INR/kwh for 500 MW from Jan'18 to Nov'18 and with a tariff of 3.16 INR/kwh for 1000 MW from Jan'19 to Sep'19. Similarly, MSPGCL (Maharashtra State Power Generation Co. Ltd) signed PPA with M/s Dhariwal Infrastructure Ltd for 185 MW and M/s Ideal Energy Projects Ltd for 215 MW in March'18 for supply of power for a period of 08 months.

- **Connecting all households under "Saubhagya"** will increase demand for electricity in the country.

- SLC (LT) in its meeting held on 24.06.2019 has recommended for grant of linkages from Coal India Limited on tariff-based competitive bidding under Para B (iv) of SHAKTI policy to the States of Gujarat (4000 MW), Uttar Pradesh (1600 MW) and Madhya Pradesh (3000 MW).

6.11 Given below is the Sector wise Plant Load Factor (PLF) of the country (Coal & Lignite based) from 2009-10 to 2019-20:

Year	PLF	Sector-wise PLF (%)		
	%	Central	State	Private
2009-10	77.5	85.5	70.9	83.9
2010-11	75.1	85.1	66.7	80.7
2011-12	73.3	82.1	68.0	69.5
2012-13	69.9	79.2	65.6	64.1
2013-14	65.60	76.10	59.10	62.10
2014-15	64.46	73.96	59.83	60.58

2015-16	62.29	72.52	55.41	60.49
2016-17	59.88	71.98	54.35	55.73
2017-18	60.67	72.35	56.83	55.32
2018-19	61.07	72.64	57.81	55.24
2019-20*	57.67	64.49	53.28	56.23

6.12 When the Committee raised the issue of falling Plants Load Factor (PLF) of power plants in the Country, the CMD, NTPC explained the situation as under:

> "Incidentally, we are still with the 15 per cent of the capacity. We are supplying around 22 to 23 per cent of the power to the country, but at the same time, what is going to happen in the future is that the PLF is going to come down further because as the renewables are going to be more and more, during the day time, there will be a backing down of the power station. So, my submission is that PLF will no more be criteria to judge the performance of the power plant companies.....I think the indication of lower PLF, not for a particular power plant, but as a country, will be a good signal that we are more developed and more self sufficient in the power sector rather than taking it as it is not performing."

***

Part – II

Observations/ Recommendations of the Committee

Annual Plan Outlay

2.1 The Committee note that Gross Budgetary Support (GBS) of the Ministry of Power for the year 2019-20 is Rs. 15,874.82 crore. However, the Ministry of Power had made a proposal for Rs. 32,001.11 crore. The Committee further note that previous year also the Ministry of Power was allocated only Rs. 15,046.92 crore against the demand of Rs. 36,843.32 crore. However, the actual utilization of fund during the said period was Rs. 15,576.30 crore which is 103.5% of the Budgetary Estimate. The Committee also note that though previous year's allocation was the highest ever for the Ministry even then they were able to fully utilized that.

The Committee appreciate the Ministry for full utilization of fund. The Committee expect this kind of committed and sincere efforts for achievement of set goals and targets. Considering the previous year's financial performance of the Ministry, the Committee are surprised at the substantial cut made by the Ministry of Finance in the proposal of the Ministry of Power for the year 2019. Though the Ministry of Finance has allowed for raising Extra Budgetary Resources (EBR) to the tune of Rs. 9,000 crore specifically for DDUGJY and Saubhagaya Scheme over and above the budgetary allocation of Rs. 15,874.82

crore, nevertheless the allocation is well short of the demand of Rs. 32,001.11 crore.

The Ministry of Power have stated that the projected requirement for Deen Dayal Upadhyay Gram Jyoti Yojana during the Interim Budget was Rs. 14,000 crore wherein only Rs 4,066 crore is given in regular Budget of 2019-20. In addition, Rs. 7,000 crore is given by the Ministry of Finance by way of raising EBR. It is further stated that total budget requirement under IPDS for the year is Rs. 6,150 crore. Out of the total requirement, only Rs 5,280.45 crore is provided in the Regular Budget. The Ministry of Power have stated that the sought amount is needed to ensure closure of R-APDRP Part-A IT, SCADA and Part-B projects including Grant in aid of Rs 100 crore. They have further stated that as on date claims worth Rs 2,880 crore has already been processed/ are under process. Also, considering the progress of IPDS project utilities may need these funds for timely completion of IPDS projects.

Considering the submission of the Ministry of Power and their previous year's financial performance, the Committee are of the view that the budgetary cut may adversely affect the progress of their flagship programmes. The Committee have persistently been emphasizing the speedy and timely completion of the projects of important programmes of the Ministry *viz*. DDUGJY, Saubhagaya and IPDS. They feel that it would be unfortunate if these programmes are delayed due to paucity of fund. The Committee, therefore, strongly recommend that adequate fund should be provided to the Ministry of

Power so that timely implementation of important programmes can be ensured. The Committee also expect that the Ministry of Power will sincerely pursue this matter at appropriate level and ensure that no delay in execution of work is caused for the want of fund.

(Recommendation Sl. No. 1, Para 2.1)

Deen Dayal Upadhaya Gram Jyoti Yojana (DDUGJY)

2.2 The Committee are happy to note that the work of electrification of all the inhabited census villages across the Country were completed on 28th April, 2018, ahead of the timeline i.e. May, 2018. The Committee appreciate the Ministry for ensuring timely electrification of all the villages. The Committee believe that the achievement of target of electrification of all villages is not only an important milestone for the Power Sector but it would also help immensely in overall socio-economic development of the country.

The Committee further note that apart from Rural Electrification, there are two other components under DDUGJY *viz*. separation of agriculture and non-agriculture feeders to facilitate Discoms in the judicious rostering of supply to agricultural and uninterrupted quality power supply to non-agricultural consumers and strengthening and augmentation of Sub-Transmission & Distribution infrastructure in rural areas, including metering of distribution transformers/feeders/consumers. In regard to status of

implementation of these components, the Ministry have stated that though DDUGJY scheme is available till 2021-22, the Government of India is impressing upon States for completion of all the component of DDUGJY before the schedule time. They have also stated that 2910 new Sub-Stations have been established/augmented; the work on 94,380 km feeder separation completed; 2,88,852 new DT installed and 1,97,267 km LT and 1,16,792 km HT new line erected. The Committee note that overall progress under the scheme in the country is 62%. The Ministry have stated that slow progress of work in some of the States is due to delay in award of the contract, delay in getting forest & railway clearances, land acquisition for sub-stations, Right of Way (RoW) issues, law & order issues and difficult terrain etc.

The Committee are of the view that the other two components of DDUGJY are equally important and supplementary to rural electrification, therefore, every effort should be made to ensure their timely completion. The Committee would like the Ministry to coordinate with the States and provide required assistance to them to expedite the implementation of the programme if the pace of work is not satisfactory.

(Recommendation Sl. No. 2, Para 2.2)

2.3 The Committee note that there is an elaborated monitoring mechanism under DDUGJY to ensure its proper implementation. At State level, a

Committee under the Chairmanship of Chief Secretary is in place to monitor progress and resolve issues relating to implementation viz. allocation of land for sub-stations, right of way, forest clearance, railway clearance, safety clearance etc. At District level, District Development Co-ordination & Monitoring Committee namely DISHA (administered by Ministry of Rural Development) headed by senior most Member of Parliament (Lok Sabha) is in place to review and monitor implementation of central sector schemes including DDUGJY. At Central level, Inter-Ministerial Monitoring Committee on DDUGJY headed by the Secretary, Ministry of Power, Government of India also monitors implementation of scheme. Besides, progress is also reviewed with States / Power Utilities in Review, Planning and Monitoring (RPM) meeting of Ministry of Power. REC Limited, the nodal agency, monitors implementation of scheme through its project offices at field level. The Project Management Agency (PMA) appointed by Project Implementing Agencies (PIAs) assists them in implementation of projects in such activities which involves formulation of Detailed Project Reports (DPRs), award of works, monitoring the progress, quality monitoring etc.

Despite all these mechanism in place, the Committee have been receiving feedback through Members of Parliament about the poor quality of work being done at the ground level. The main complaint in this regard is that despite pointing out to the poor quality of work, hardly any remedial measure is taken. The Committee, therefore, recommend that the Ministry should keep track of

the meetings of the DISHA and get report/ feedback on matters discussed therein pertaining to electricity sector especially schemes such as DDUGJY and IPDS. The Committee also expect the Ministry to take prompt and sincere action on such issues under intimation to the respective Member of Parliament.

(Recommendation Sl. No. 3, Para 2.3)

Saubhagya Scheme

2.4 The Committee note with satisfaction that Pradhan Mantri Sahaj Bijli Har Ghar Yojana – Saubhagaya, a scheme to achieve universal household electrification by providing last mile connectivity and electricity connections to all remaining un-electrified households in rural and urban areas, has been a great success. All States declared electrification of all households on 31st March 2019, except 18,734 households in Left Wing Extremist (LWE) affected areas of Chhattisgarh. Since launch of Saubhagya, 2.63 crore households were electrified across the country up to 31st March 2019. The Committee, considering the scale of work and the limited time period, feel that it was indeed a herculean task. The Committee appreciate the Ministry for taking this much needed initiative and also accomplishing it in a time bound manner. This scheme has special significance for this Committee as they have since long been persuading the Government to focus on electrification of all households

instead of declaring a village electrified by providing electricity connection to households as few as 10% of that village.

The Ministry have stated that subsequently seven States namely Assam, Chhattisgarh, Jharkhand, Karnataka, Manipur, Rajasthan, and Uttar Pradesh reported that there are 19.09 lakh un-electrified households which were earlier un-willing, and now willing to get electricity connection, identified before 31st March, 2019. The Ministry have further informed that States have been asked to electrify these household under Saubhagya by 31st December, 2019. It is also stated that out of these, 3.44 lakh households have been electrified up to 27th September, 2019.

The Committee do understand that electrification of household is an ongoing process, however, the number of 'unwilling' households is too large to be a regular affair. This figure also vindicates the apprehension of this Committee that a sizeable number of households were left out of the scheme for whatever reasons. The Committee expect that the Ministry would carry on the good work without slowing down its pace. The Committee, recommend that all the left out/'now willing' households be electrified within the targeted date of 31st December, 2019. The Committee also expect that the Ministry of Power with the help of State Government would run awareness programme and encourage people to get electricity connection under the scheme.

(Recommendation Sl. No. 4, Para 2.4)

Integrated Power Development Scheme (IPDS)

2.5 The Committee note that the Integrated Power Development Scheme (IPDS) was formulated on 20th November, 2014 with an objective to provide 24x7 power supplies for consumers and to provide access to all urban households and facilitate State Power Utilities to reduce the level of AT&C losses to 15%. The programme (excluding R-APDRP component) have estimated outlay of Rs. 32,000 crore including a budgetary support of Rs. 25,354 crore from Government of India during the entire implementation period. Besides this R-APDRP scheme cost of Rs. 44,011 crore including a budgetary support of Rs. 22,727 crore as already approved by CCEA will be carried forward to the new scheme of IPDS in addition to the outlay for other components.

In regard to progress of implementation of the scheme, the Ministry have stated that a total of Rs. 32,059 crore for 546 circles in 32 States/UTs has been sanctioned. Also, an amount of Rs. 11,737 crore (of GOI component of Rs.20,103 crore) has been released by Ministry of Power to States in addition to Rs. 181 crore for enabling activities for implementation of urban distribution system strengthening projects under IPDS. Utilities have reported that Sub-transmission and Distribution (ST&D) works have been completed in 336 circles out of 546 Circles. The Committee are well aware of the importance of IPDS scheme in strengthening of Distribution Sector which is the weakest link in the power system. The Committee are also aware of the enormity of work proposed

to be carried out under the scheme and the complexities owing to involvement of multiple agencies. However, the Committee also note that the scheme of R-APDRP was initiated way back in the year 2008 and even after more than a decade we are not able to reduce AT&C losses to 15%. However, it is another issue that even 15% AT&C losses are not justified if IPDS is fully implemented. The Committee are of the belief that unless the distribution sector is strengthened, economic viability of the whole power sector cannot be ensured.

The Committee, therefore, recommend that all out efforts be made to expedite the execution of work under the scheme. The Committee expect the Ministry to closely monitor the progress of the scheme and provide assistance to Discoms to resolve issues if they themselves are unable to overcome it. The Committee, further desire that the Ministry should provide guidance and share information relating to best practices/success stories/experiences learnt during implementation of the scheme, at appropriate forum, with the Discoms which are lagging behind in implementation of this scheme.

(Recommendation Sl. No. 5, Para 2.5)

2.6 The Committee note that reduction of AT&C losses is the main objective of IPDS. The works envisaged under IPDS are aimed at strengthening the distribution system and plugging the gaps so that AT&C losses can be brought down to the level of 15%. The Ministry have informed that as per

latest available report (2015-16) of 'Performance of State Power Utilities' as released by Power Finance Corporation, AT&C losses at All India level stand at 23.98%. However, as per Ministry, the losses were at the level of 20.81% in the year 2018. The Committee find that despite decade long efforts and spending of thousands of crores is yet to be achieved the targeted level of 15% of AT&C losses. The Committee also find it surprising that though IPDS scheme is being implemented circle wise, the circle-wise AT&C losses are not available with IPDS Unit, PFC. The Committee, therefore, infer that there is no data to suggest that implementation of IPDS will necessarily lead to reduction of AT&C losses. They are of the view that the whole exercise of the Central Government becomes infructuous if the goal of reducing AT&C losses is left again on the discretion/will power of Discoms and their administrative capabilities to do so. The Committee in the past also have been raising the need for segregation of commercial losses and technical losses as far as possible so that the losses due to pilferages and inefficiency of Discoms in metering, billing and collection of dues can be brought out and addressed. The Committee are aware that the Ministry offer incentive to Discoms on timely reduction of AT&C losses but still AT&C losses are not decreasing at the desired rate. The Committee, therefore, recommend that apart from creation of enabling infrastructure and providing financial incentives, the Ministry should form a study group to examine the case of each and every Discom whose performance is not up to the mark in terms of reduction of AT&C losses. The Committee expect that besides prescribing remedial action to them, the Ministry would put relevant

data/information relating to AT&C losses of Discoms in public domain for awareness of consumers of the respective Discoms.

(Recommendation Sl. No. 6, Para 2.6)

Bureau of Energy Efficiency (BEE)

2.7 The Committee note that that Bureau of Energy Efficiency (BEE) is the nodal central statutory body to assist the Government in implementing the provisions of the Energy Conservation Act. As a quasi-regulatory and policy advisory body, the Bureau helps in developing policies and strategies that emphasize self-regulation and market principles to achieve the primary objective of reducing the energy intensity of the Indian Economy.

The Committee feel that budgetary allocation to BEE during the last 4-5 years does not commensurate with the importance of an organization which is responsible for implementing a significant programme – 'Energy Efficiency'. Moreover, the actual utilization of allocated fund during the period leaves much to be desired. In the year 2015-16, the actual utilization was Rs. 35 crore against the allocation of Rs. 48 crore. Similarly, in 2016-17, 2017-18, and 2018-19 the actual utilization was Rs. 54.15 crore, Rs. 27 crore and Rs. 10.49 crore against the allocation of Rs. 63.29 crore, Rs. 49 crore and Rs. 100.16 crore respectively. During the current year Rs. 100.16 crore has been

allocated. Considering their necessity and enormous benefits derived from the Energy Efficiency programmes, the Committee are of the opinion that there is a need to suitably enhance the fund allocation for BEE. However, at the same time they also desire that whatever fund is allocated to them should be fully utilized.

(Recommendation Sl. No. 7, Para 2.7)

2.8 The Committee note that India has been participating as one of the leading party in the Conference of Parties (COP) under the United Nations Framework Convention on Climate Change (UNFCCC). The twenty-first session of the COP that took place in 2015 at Paris reached a landmark agreement called the "Paris Agreement" to combat climate change. The aim of the Paris Agreement is to strengthen the global response to the threat of climate change by keeping the global temperature rise well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. The Government of India has submitted its Nationally Determined Contributions (NDCs) to UNFCCC in 2015, endorsing country's ambitious commitment towards the issues related to climate change and ratified it in the year 2016.

In this scenario, the Committee feel that the role of BEE has become very crucial in implementation of various energy efficiency and conservation

programmes. To fulfill this commitment, more and more energy efficiency measures have to be taken. However, the Committee also believe that irrespective of that commitment, expansion and intensification of energy efficiency is in the interest of the Country. Energy Efficiency Programmes are not only beneficial from environmental perspective but also a profitable business as it leads to reduction in energy cost. The Committee find that the energy efficiency programs being run by BEE are relevant and quite effective and the saving caused by them in terms of energy and cost, is astonishing. Though remarkable achievements have been made under these programmes, the Committee are of the belief that there is still great potential in the field of energy efficiency. The Committee, therefore, recommend that Energy Efficiency Programmes should further be expanded and intensified.

(Recommendation Sl. No. 8, Para 2.8)

2.9 The Committee note that BEE have enumerated many constraints which are being faced in implementation of various Energy Efficiency programmes. They have prominently raised the issue of financing of Energy Efficiency projects and stated that it still continues to be the grey area in this sector. Energy efficiency financing is considered to be loaded with high risks in most of the cases. Industries are hesitant to invest with the perception of longer period for getting return on investment. Energy Service Companies

(ESCOs) are facing shortage of adequate funds thereby stalling the projects on ESCO mode and restricting their adequate institutionalization. Energy Efficiency financing through commercial banks and NBFCs is facing the lack of awareness and capacity to understand the Energy Efficiency Financing concepts like factors to be considered during appraisal process, technical risk appraisal considerations, etc. The Committee desire that lack of finances should not become a roadblock in implementation of Energy Efficiency Programmes, therefore, they recommend the Ministry to take up this issue at appropriate level for its resolution. The Committee also expect the Ministry to encourage Public Sector Undertakings of Power Sector to finance these projects.

(Recommendation Sl. No. 9, Para 2.9)

Central Power Research Institute (CPRI)

2.10 The Committee note that the core activities of the Central Power Research Institute (CPRI) are Applied Research in electrical power engineering, Testing & Certification of Power equipment, Consultancy and Field testing services to Power Utilities and Industries, Third Party Inspection and Vendor Analysis, Organizing Customized Training programs for Utilities and Industries. The Committee also note that a provision of Rs. 200 crore has been made for CPRI for the year 2019-20. The allocation of Rs. 200 crore may appear sufficient considering track record of the organization in utilization of fund., the

Committee, however, are of the view that it does not reflect the future aspirations of the country. The Committee believe that there is immense potential for Research and Development in the Country as we are one of the biggest consumers of power in the world with a vast network and mammoth infrastructure. However, when it comes to major achievements in the field of technology and innovation, still much is needed to be done. The Committee are of the view that instead of being dependent on developed countries for research and technological upgradation, it would be prudent if we take initiatives and provide support to our research institutes to work on the projects which would cater our specific requirements. The Committee feel that development of storage capacity, electric vehicle and its charging system, efficiency of solar panels etc. are some of the areas where we need to focus. They also feel that there is a need to expand the base of R&D in the Country so that we can not only fulfil our domestic requirements but also become a leading country in the field of technology and innovation.

(Recommendation Sl. No. 10, Para 2.10)

National Power Training Institute (NPTI)

2.11 The Committee note that National Power Training Institute (NPTI) is a National Apex body for fulfilling the training requirements of the power sector in the Country. Also, NPTI has been appointed as the Certifying Authority for SYSTEM OPERATOR of NLDC, RLDCs, SLDCs. NPTI also functions as an Apex

Cadre Training Institute for Engineer/Officer of Central Power Engineering Service (Ministry of Power, Govt. of. India). NPTI operates through nine Institutes in the different power zones of the country on an all India basis with Manpower Strength of 219 including 87 Officer and they have trained over 3,37,900 power professionals in its regular programs over the past five decades. The Committee note that the budgetary allocation for NPTI for the year 2016-17, 2017-18 and 2018-19 was Rs. 40.40 crore, 57.20 crore and 100.55 crore respectively. However, for the year 2019-20, an allocation of only Rs. 69 crore is made. The decrease in allocation of fund for NPTI is a bit surprising for the Committee. The Committee are well aware of the requirement of trained personnel for development of power sector and are of the opinion that shortages of trained manpower should not come in the way of faster development of the sector. The Committee have observed that in implementation of every scheme of the power sector, the availability of adequate trained manpower has been an issue. Also, for undertaking any reform in the power sector, proper training of personnel is a prerequisite. The Committee, believe that there is dire need to augment our training capacities considering technological up-gradations and future reforms which will require more and more trained manpower. The Committee, therefore, recommend the Ministry to review the budgetary provisions for NPTI with a view to enhance it.

(Recommendation Sl. No. 11, Para 2.11)

Ujwal DISCOM Assurance Yojana (UDAY)

2.12 The Committee note that UDAY (Ujwal DISCOM Assurance Yojana), a scheme for financial and operational turnaround of Power Distribution Companies (DISCOMs) was formulated and launched by the Government on 20th November, 2015 in consultation with the various stakeholders to ensure a sustainable permanent solution to the problem of legacy of debts and address potential future losses. The scheme envisages reform measures in all sectors – generation, transmission, distribution, coal, and energy efficiency. The Scheme also envisages reducing interest burden, cost of power and AT&C losses. Under the scheme, States are to take over 75% of debt of DISCOMs as on 30th September, 2015 which would be outside the FRBM limits. The Scheme is operationalized through a bipartite/tripartite agreement amongst the Ministry of Power, State Government and the DISCOMs. The Scheme is optional for all States to join and there is no financial implication on the part of the Central Government.

The Committee also note that so far 27 States and 5 UTs have signed Memorandum of understanding under UDAY. While 16 States have signed comprehensive MoU which includes financial restructuring of debt, other 16 States/UT have signed the MoU only for operational improvements. States of West Bengal and Odisha and Union Territories (UTs) of Delhi and Chandigarh have not joined the scheme. 16 states which have opted for financial

restructuring, a debt of Rs.2.69 lakh crores were sought to be addressed (3 states i.e. Maharashtra. A.P. & Tamil Nadu have opted for restructuring of only a part of their debt). Out of the above, total of Rs. 2.32 lakh crores of Bonds have so far been issued (87% of UDAY states debt to be addressed) consisting of States Bonds of Rs. 2.09 lakh crores and DISCOMs Bonds of Rs. 0.23 lakh crores. DISCOM Bonds worth Rs. 0.37 lakh crores are yet to be issued.

In regard to achievement under UDAY, the Committee note that AT&C losses which were at 20.81% in the year 2016, have dropped to 18.19% in the year 2019. During the same period billing efficiency has also slightly improved from 81.57% to 84.31%, whereas, no improvement in collection efficiency is reported. The only encouraging result has been seen in the gap between Cost of Supply (ASC) and Average Revenue Received (ARR) which was drastically reduced to 0.17 (Rs./kWh) in 2018 from 0.60 (Rs./kWh) in 2016. However, during the year 2019 it has rebounded and increased upto 0.27 (Rs./kWh). Likewise, the losses of Discoms which were reduced to Rs. 15,132 crore in the year 2018 have again increased to Rs. 28,036 crore in the year 2019.

The Committee had high expectations hopes that UDAY would be successful in turning around the financial condition of the Discoms by making them economically viable on sustainable basis. However, it is a matter of concern for the Committee that the losses of Discoms are rebounding after 3 years of introduction of UDAY. The Committee have always been emphasizing the importance of Distribution Sector for power sector and the need for reforms

to make it robust and self sustainable. The Committee, therefore, recommend the Ministry to examine the reasons responsible for rebounding of losses and take remedial measures on urgent basis. The Committee also expect that necessary changes shall also be made in UDAY to make it more effective.

(Recommendation Sl. No. 12, Para 2.12)

Development of Power Sector

2.13 The Committee note that there is 3,63,370 MW of total installed generation capacity in the Country. The Committee further note that against the Peak Demand of 177,022 MW, only Demand of 175,528 MW was met leaving a gap of 0.8%. Similarly, against the total energy requirement of 1,274.6 BU, only 1,267.5 BU could be supplied with a deficiency of 0.6%. During the year 2019 also there is Peak and Energy deficit of 0.7% and 0.5% respectively. The inability to fully meet the demand despite having more than adequate installed generation capacity indicates that there are some issues which need to be addressed. The Ministry have stated that this demand–supply gap is due to constraints in sub-transmission and distribution network, commercial reasons, financial constraints of State utilities, etc. The Committee feel that a concrete plan need to be framed to bridge the gap between demand and supply as the country at present have the installed generation capacity in excess of the peak hour demand. The Committee, therefore, recommend that

sincere efforts be made to remove the constraints in meeting the demand of electricity in the Country.

(Recommendation Sl. No. 13, Para 2.13)

2.14 The Committee note that there are 34 stressed assets in thermal power sector. Out of 40,130 MW of the total installed capacity of these 34 projects, 26,265 MW is commissioned, 19,005 MW capacity has PPA and 25,702 MW has fuel linkage. The Ministry have stated that they have classified these projects in three categories. Category–I Projects which are mostly commissioned and have been resolved/ likely to be resolved and/or serving their debt and/or are not in NCLT. A total of 17 projects come under this category. 11 out of 17 of these projects have already been resolved. Category-II Projects are only partly commissioned & have been referred to or admitted under NCLT waiting for resolution. A total of 11 projects come under this category. Category-III: Projects which are at very initial stage of construction and are totally stalled. Such projects have either been ordered to be liquidated or are heading towards liquidation. A total of 6 projects come under this category.

The Ministry have enumerated various efforts that have been made to take out these projects from stress. The Committee have considered stress/NPA in the Power Sector as an important issue, therefore, they have

examined this subject in detail and presented Reports thereon. The Committee, therefore, recommend the Government to pursue this matter diligently and should leave no stone unturned to find a solution to this problem. Needless to emphasize that while resolving the matter sincere efforts be made by the Government to make these assets standard by providing all possible assistance to them before they are ultimately considered for liquidation.

(Recommendation Sl. No. 14, Para 2.14)

2.15 The Committee have also observed that supply of coal is one of the main issues that are creating problems for the power sector. The issue of non-availability/ short supply of coal, is not only causing stress to many power plants, but also adversely affecting the tariff of electricity. Despite raising this issue time and again, the Committee find that there is still no satisfactory resolution of this issue. In the view of the Committee, the short supply of coal for power, for whatever reason, is a matter of concern, more so, when there are abundant coal reserves in the Country. Due to constraints in supply of domestic coal the power sector is resorting to import of costlier coal which obviously results in higher tariff of electricity. The Committee, therefore, recommend that the Ministry of Power should take up this matter at appropriate level to find a long term solution to this problem. The Committee are also aware that some flexible use arrangement/rationalisation of coal supply from different sources

has been done which has not only helped in optimizing operation of power plants but also resulted in considerable savings. The Committee laud this effort and also desire that similar efforts shall further be made to optimized utilization of available coal resources.

(Recommendation Sl. No. 15, Para 2.15)

2.16 The Committee note that Plant Load Factors (PLFs) of thermal power plants over the years have been decreasing. The Committee was also informed that in future the PLF is going to come down further due to increase in renewable energy capacity. It was further submitted that indication of lower PLF, not for a particular power plant, but as a country, will be a good signal that we are more developed and more self sufficient in the power sector rather than taking it as not performing. The Committee do understand that lower PLF may be indication of having adequate generation capacity, nevertheless, in the interest of the country in general and the end consumers in particular, it is imperative that the available resources are optimally utilized. As the Committee have observed in the preceding para that abundant generation capacity *per-se* does not guarantee supply of the required power. The Country still have peak shortage of 0.7% despite having more than enough generation capacity.

The Committee, therefore, are of the view that instead of focusing only on augmentation of generation capacities there should be some

study/planning as to how utilization of thermal power plants are not much impacted by the present and upcoming renewable energy projects. The Committee, therefore, recommend that our efforts should not be targeted only to chase the peak demand but also to bring it down and even out the demand as far as possible so that optimum utilization of resources can be ensured. Further, as Pumped Storage Plants can be utilized as storage system for solar/surplus power, the Ministry should make efforts to develop more and more of such projects.

The Committee has been emphasizing the need to develop and harness the huge untapped hydro power potential in the country. Since the Country have sufficient generation capacities in the present time, the Ministry should go for long term planning to develop the sector in a desired manner. It is, therefore, high time to go whole hog to develop hydro power projects which takes comparatively longer time but are the source of clean and cheaper energy in the long run. Its role in grid stability and use as peaking power, adds to its various other advantages.

(Recommendation Sl. No. 16, Para 2.16)

New Delhi;
4th December, 2019
13 Agrahayana, 1941 (Saka)

Rajiv Ranjan Singh *alias* Lalan Singh
Chairman,
Standing Committee on Energy