

**MINISTRY OF POWER** 

DEMANDS FOR GRANTS 2016-17

**FIFTEENTH REPORT** 



LOK SABHA SECRETARIAT NEW DELHI

April, 2016/Vaisakha, 1938 (Saka)

#### **FIFTEENTH REPORT**

STANDING COMMITTEE ON ENERGY (2015-16)

(SIXTEENTH LOK SABHA)

#### **MINISTRY OF POWER**

# DEMANDS FOR GRANTS (2016-17)

#### Presented to Lok Sabha on 02.05.2016

Laid in Rajya Sabha on 02.05.2016



#### LOK SABHA SECRETARIAT NEW DELHI

April, 2016/Vaisakha, 1938 (Saka)

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#### COMPOSITION OF THE STANDING COMMITTEE ON ENERGY (2015-16)

#### LOK SABHA

Dr. Kirit Somaiya - Chairman

- 2. Shri Om Birla
- 3. Shri M. Chandrakasi
- 4. Shri Ashwini Kumar Choubey
- 5. Shri Harish Chandra alias Harish Dwivedi
- 6. Shri Deepender Singh Hooda
- 7. Shri Saumitra Khan
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- 16. Shri M.B. Rajesh
- 17. Shri Vinayak Bhaurao Raut
- 18. Shri Gutha Sukender Reddy
- 19. Shri Devender Singh alias Bhole Singh<sup>®</sup>
- 20. Shri Purno Agitok Sangma\*
- 21. Shri Malyadri Sriram
- 22. Shri Bhanu Pratap Singh Verma

#### **RAJYA SABHA**

- 23. Shri V.P. Singh Badnore
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- 29. Shri Ananda Bhaskar Rapolu
- 30. Dr. Anil Kumar Sahani
- 31. Shri Javed Ali Khan
- 32. Shrimati Viplove Thakur

#### SECRETARIAT

- 1. Shri K. Vijayakrishnan
- 2. Shri N.K. Pandey
- 3. Shri Manish Kumar

Additional Secretary

Director

Senior Executive Assistant

**@** Nominated as Member of the Committee w.e.f. 13<sup>th</sup> April, 2016, consequent upon vacancy caused by the death of Shri P.A. Sangama on 4<sup>th</sup> March, 2016.

\* Expired on 4<sup>th</sup> March, 2016.

## INTRODUCTION

I, the Chairperson, Standing Committee on Energy having been authorized by the Committee to present the Report on their behalf, present this Fifteenth Report on Demands for Grants of the Ministry of Power for the year 2016-17.

2. The Committee took oral evidence of the representatives of the Ministry of Power on 29<sup>th</sup> March, 2016 and 11<sup>th</sup> April, 2016. 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 27<sup>th</sup> April, 2016.

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 <u>29<sup>th</sup> April, 2016</u> Vaisakha 9, 1938 (Saka) DR. KIRIT SOMAIYA Chairman, Standing Committee on Energy

#### REPORT

#### PART-I

#### NARRATION ANALYSIS

#### I. INTRODUCTORY

1.1 The Power Sector of the country is going through a period of transition. There has been a massive capacity addition in the thermal power generation sector in the recent years mainly due to the advent of the private sector in the field in a big way. Now, planning is underway for a mammoth capacity addition of 1.75 GW of Renewable Energy from Solar, Wind, etc. The substantial augmentation of power generation capacities and their future planning indicate that electricity access to all in the country could become a reality soon. However, augmentation of generation capacity addition *perse* does give a guarantee for universal access of electricity in the country. There is also a need for corresponding augmentation and strengthening of the transmission and distribution system of the country. This sector on which the economic viability of the whole power sector hinges has been the most distressed and neglected area. The distribution sector is marred with high commercial and technical losses and is in dire need of renovation, augmentation, reforms and ample investment. Due to their bad financial health, utilities they are finding it difficult to purchase electricity from generation companies forcing them to run below optimum level. Therefore, there is urgent need to take steps to redress the issue, so that the progress of other sectors are not adversely affected.

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);
  - (I) 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 (2016-17)

1.6 The Minister of State for Power laid on the Table of the Lok Sabha, the detailed Demands for Grants (2016-17) for the Ministry of Power on 10<sup>th</sup> March, 2016. The Demands show a budgetary provision of GBS of Rs. 12,200 crore. The Central Plan Outlay, including IEBR, i.e. Rs. 67,683.57 crore, however, stands at Rs. 79,883.57 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. Assistance to CPSEs:

**2.01. National Hydro Electric Power Corporation Limited (NHPC):..**NHPC was set up in 1975 under the 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.

**2.02. Tehri Hydro 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.

**2.03. Damodar Valley Corporation (DVC):..**DVC was established in 1948 for the promotion and operation of irrigation, water supply, drainage, generation, transmission and Hydroelectric Power in Damodar Valley.

**2.04.** North Eastern Electric Power Corporation (NEEPCO):...The North Eastern Electric Power Corporation Limited (NEEPCO), a Schedule A Mini Ratna company under

the Ministry of Power, set up on 2<sup>nd</sup> 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.

**3.01. Central Electricity Authority:..**The Central Electricity Authority (CEA) as a statutory organization is responsible for the overall powering 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. CEA advises the Central Government on the National Electricity Policy and formulates short term Prospective Plans for development of the electricity system. It also has the mandate to collect, record and make public, data related to all segments of the electricity sector, carry out investigations and promote research.

**3.02.** Setting up of Joint 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.

**3.03. 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.

**3.04. Forum of Regulators:..**The provision is for providing funds to the Forum of Regulators for capacity-building and availing consultancy services.

#### 4. Research and Training:

**4.01. Central Power Research Institute, Bengaluru:..**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.

**4.02.** National Power Training Institute (NPTI):...National Power Training Institute is engaged in imparting training in various aspects of power sector, including operation and maintenance of power stations.

# 5. Deen Dayal Upadhyay Gram Jyoti Yojana:

**5.01-5.02. Rural Electrification, Feeder Separation, Strenghthening of SubTransmission & Distribution Infrastructure:..**Government of India has launched a new scheme Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) with the 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 RGGVY has been subsumed in DDUGJY as its Rural Electrification component.

# 6. Integrated Power Development Scheme:

**6.01-6.03. Sub-Transmission and distribution system improvement in urban areas, metering & IT enablement in distribution sector:..**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-transmission and distribution system in urban areas, metering & IT enablement in distribution sector under ongoing 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 technologybased 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.

# 7. Conservation and Energy Efficiency:

**7.01. Bureau of Energy Efficiency (BEE):..**Funds are provided to the 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. These initiatives by the Government will enhance efficiency of energy consumption and reduce the rate of growth of energy consumption.

**7.02. 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.

# 8. Strengthening of Power System:

**8.01. Smart Grid:..**The scheme envisages setting up of an institutional mechanism by launching the '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.

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

**8.03.** National Electricity Fund (Interest Subsidy Scheme):..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 Sectors, to improve the distribution network for areas not covered by RGGVY and R-APDRP scheme (since subsumed in DDUGJY and IPDS, respectively) Project areas. The pre-conditions for eligibility are linked to certain reform measures undertaken by the States and the amount of interest subsidy is linked to the progress achieved in reforms linked parameters.

**8.04. Financial Support for Debt Restructuring of DisComs:..** The scheme has been formulated and approved by the Govt. to enable the turnaround of the State DisComs and ensure their long term viability. The scheme contains measures to be taken by the State DisComs and State Govts. for achieving financial turnaround by restructuring their debt with support through a Transitional Finance Mechanism from the Central Govt.

**8.05.** Power System Operation Corporation Ltd. (POSOCO):...The provision is for POSOCO setup as an Independent Government Company under the Ministry of Power by acquiring the shares currently held by PGCIL in POSOCO.

**8.06. 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 substations in Jammu & Kashmir (J&K).

**8.07.** Power System Improvement in North Eastern States, excluding Arunachal Pradesh and Sikkim:...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 and Distribution projects for Sikkim & Arunachal Pradesh have been segregated for implementation through budgetary support from the Government of India in view of these States having sensitive borders.

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

**8.09.** Funds for Evaluation Studies and Consultancy:...This provision is for conducting evaluation studies of various projects/programmes/ schemes.

**8.10. Comprehensive Award Scheme:..**Shields and Certificates are given away by the Ministry of Power to the generating stations, transmission and distribution utilities as well as rural distribution franchisees for recognizing meritorious performance in operation, project management and environmental protection.

# 9. Power System Development Fund (PSDF):

**9.01-9.04. Power System Development Fund (PSDF):..**The scheme envisages (a) strengthening of the existing distribution and transmission infrastructure by part-funding through Grants; (Non-Gas component) (b) Provision for subsidy to DISCOMS purchasing electricity from stranded Gas based Power Plants (Gas component).

#### III. ANNUAL PLAN OUTLAY

1.7 During the Regular Budget of 2016-17, the Ministry of Power sought an outlay Rs. 31,519.84 crore (GBS component). However, the Ministry of Finance approved and allocation of Rs. 12,200 crore only. The total outlay for the year 2016-17 is Rs. 79,883.57 crore comprising IEBR of Rs. 67,683.57 crore and GBS of Rs. 12,200 crore. Details of the GBS components are as given in the table below:

S.No in	Name of the Schemes	Proposed Budget	Approved Budget
SBE		Estimates 2016-	Estimates 2016-
		17	17
1	2	3	4
1	Computerization and office expenses*	1.24	0
2	Assistance to CPSEs		
2.01	National Hydro Electric Power Corporation Ltd.	1304.37	367.00
2.02	Tehri Hydro Development Corporation (THDC)	75.00	40.00
2.03	North Eastern Electric Power Corporation (NEEPCO)	746.23	166.13
2.04	Acquisition of Coal bearing areas for NTPC	783.00	232.50
2.05	Deduct Recoveries	-783.00	-232.50
	Total-Assistance to CPSEs	2125.60	573.13
3	Statutory Authorities		
3.01	Central Electricity Authority	18.22	10.00
3.02	Forum of Regulator(FOR)	2.15	1.00
	Total-Statutory Authorities	20.37	11.00
4	Research and Training		
4.01	Central Power Research Institute, Bengaluru	302.00	125.00
4.02	National Power Training Institute (NPTI)	112.91	33.00
	Total-Research and Training	414.91	158.00
5	Deen Dayal Upadhyaya Gram Jyoti Yojna	10300.00	3000.00
6	Integrated Power Development Scheme	10158.00	5500.00
7	Conservation and Energy Efficiency		
7.01	Bureau of Energy Efficiency	267.60	64.00
7.02	Energy Conservation	749.22	100.00
	Total-Conservation and Energy Efficiency	1016.82	164.00
8	Strengthening of Power Systems		

8.01	Smart Grid	85.10	30.00
8.02	Green Energy Corridor	1.00	0.10
8.03	Interest Subsidy to National Electricity Fund	100.00	25.00
8.04	Financial Support for Debt Restructuring of DISCOMs	1.00	0.01
8.05	Power System Operation Company (POSOCO)	0.00	81.21
8.06	220 KV Transmission Line from Srinagar to Leh via Kargil	536.00	250.00
8.07	Power System Improvement in North Eastern States, excluding Arunachal Pradesh and Sikkim	674.00	234.00
8.08	Strengthening of Transmission System in the States of Arunachal Pradesh and Sikkim	1085.00	273.00
8.09	Funds for Evaluation Studies and Consultancy	0.30	0.01
8.10	Comprehensive Award Scheme for Power Sector	0.50	0.54
	Total-Strengthening of Power Systems	2482.90	893.87
9	Power System Development Fund (PSDF)		
9.02	Scheme for Power System Development to be met from PSDF	1000.00	400.00
9.03	Power System Development Fund (PSDF) and Utilisation of Gas based Generation Capacity	4000.00	1500.00
	Total-Power System Development Fund (PSDF)	5000.00	1900.00
	Total	31,519.84	12,200.00

\*This scheme has been shifted to Non-Plan side from FY 2016-17 onwards

1.8 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 Power Sector CPSUs have capex target in excess of Rs. 50,000 crore per year. The expenditure under IEBR is not routed through government budget/demand for grant. It is managed by the Board of the respective PSUs.

1.9 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. For the 12<sup>th</sup> Plan, GBS size is Rs. 54,279 crore. The expenditure under GBS is routed through the Ministry's budget.

1.10 The utilization of Gross Budgetary Support during the 11<sup>th</sup> and the 12<sup>th</sup> Plans so far against the Budget Estimate is shown below:

		-							(13.11)		
CI		BE				RE			Actual		
No	Year	Plan	Non- Plan	Total	Plan	Non - Plan	Total	Plan	Non- Plan	Total	
1.	2007-08	5483.00	411.19	5894.19	4350.0 0	404.5 3	4754.5 3	4289.59	235.24	4524.83	
2.	2008-09	6000.00	395.76	6395.76	6100.0 0	271.5 1	6371.5 0	6049.97	196.05	6246.02	
3.	2009-10	9230.00	276.73	9506.73	6814.0 0	216.8 0	7030.8 0	6711.98	208.74	6920.72	
4.	2010-11	10630.00	133.58	10763.5 8	8725.2 2	114.6 9	8839.9 1	8601.80	107.36	8709.16	
5.	2011-12	9642.00	137.68	9779.68	6051.0 0	131.3 4	6182.3 4	4699.98	127.37	4827.35	
6.	2012-13	9642.00	133.77	9775.77	4708.00	410.86	7901.93	2536.71	3526.8 8	6063.59	
7.	2013-14	9642.00	671.70	10313.7	5000.0 0	410.86	5410.86	4529.72	650.81	5180.53	
8.	2014-15	9642.00	126.50	9768.5	5700.0 0	102.0 0	5598.00	4884.22	115.37	4999.59	
9.	2015-16	6799.74	134.76	6934.50	8084.3 7	129.30	8213.67	7826.84	127.80	7954.64	

1.11 The actual utilization of Plan outlay since the year 2007-08 as against the Budget Estimates is shown below:

Year	BE (Rs. in crore)	RE (Rs. in crore)	Actual Utilization (Rs.in crore)	% of Budget Estimate
2007-08	33,153.26	30,690.38	25,887.63	78.08%
2008-09	40,460.10	36,306.47	37,656.00	93.07%
2009-10	53,126.27	45,269.60	39,884.23	75.07%
2010-11	60,751.42	45,668.03	43,144.16	71.02%
2011-12	66,382.73	62,791.73	46,083.87	69.42%
2012-13	62,424.50	54,696.01	52,976.99	84.86%
2013-14	59,329.41	53,962.89	56,749.24	95.65%
2014-15	60,384.02	55,488.18	65,270.21	108.09%
2015-16	61,404.47	66,369.56	63,642.67	103.64%

(Rs. in crore)

1.12 Expounding the budgetary provisions for the year 2016-17, the Secretary, Power,

during the sitting, deposed before the Committee as under:

"The Annual Plan for 2016-17 for the Ministry has an approved outlay of about Rs 79883.57 crore in the Plan which includes Gross Budgetary Support of Rs 12,200 crore and IEBR of Rs. 67,683 crore. Now this Rs 12,200 crore in 2016-17 is one of the highest allocations in the five years of the 12th Plan. Next year is the last year of the 12th Plan. If you look at the GBS figure from 2012-13, 2013-14, 2014-15, 2015-16, and the next year, this is one of the highest GBS allocation in the current year of the Five Year Plan period. In the year 2015-16 also, the allocation GBS was Rs. 6800 crore and in the RE it has got increased to Rs. 8084 crore. So, our performance over the last four years has improved. In the current year, we have already achieved close to 95 per cent of expenditure. That gives us the confidence to say that next year also, despite the allocation going up by another 20 to 25 per cent, we will be in a position to achieve not only the expenditure but also the related physical targets that have been given to the Ministry."

1.13 When the Committee desired to know whether the allocation of funds for the flagship

programmes of the Ministry is sufficient, the Secretary, Power, stated as under:

"Honestly, as on today, our two main flagships schemes, Deen Dayal Upadhyay for which about Rs. 3,500 crore have been provided in the current year and last year also about Rs. 4,500 crore was provided; and IPDS allocation is Rs. 5,500 crore. So, our budgeted provision has gone up. The allocation for PSDF has also been about Rs. 1,900 crore. Looking at our preparedness, the DPRs being sanctioned, the State Governments preparedness to spend, at the moment, we are fine with it. My request is that in the month of September / October, at the stage of RE, probably, we will ask for more. I know that, ultimately, the fund requirement is very high, but as on today it is okay.

1.14 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. The Plan & Non-Plan quarterwise utilization of the budget allocations for the last three years is given below:

Plan (Rs							
FY (Allocation in BE)		Qtr 1	Qtr 2	Qtr 3	Qtr 4	Total	
2012-13	Actuals	268.92	1431.92	250.01	585.86	2536.71	
(9642.00)	Percentage	2.79	14.85	2.59	6.08	26.31	
2013-14	Actuals	1761.70	834.41	1285.62	647.99	4529.72	
(9642.00)	Percentage	18.27	8.65	13.33	6.72	46.98	
2014-15	Actuals	101.16	3082.23	1438.87	NA	NA	
(9642.00)	Percentage	1.05	31.97	14.92	NA	NA	
2015-16	Actuals	1522.92	2269.01	2411.88	-	-	
(6799.74)	Percentage	22.40	33.37	35.47	-	-	

Non-Plan (Rs								
FY (Allocation in BE)		Qtr 1	Qtr 2	Qtr 3	Qtr 4	Total		
2012-13	Actuals	30.33	26.34	24.44	3445.77	3526.88		
(133.77)*	Percentage	22.71	19.72	18.30	2579.56	2640.28		
2013-14	Actuals	31.53	561.90	28.43	28.95	650.81		
(671.70)**	Percentage	4.69	83.65	4.23	4.31	96.89		
2014-15	Actuals	35.44	32.55	29.41	NA	NA		
(126.50)	Percentage	28.02	25.73	23.25	NA	NA		
2015-16	Actuals	35.49	36.77	32.57	-	-		
(134.76)	Percentage	26.34	27.29	24.17	-	-		

\*The last column in Non-Plan actual for 2012-13 is including Rs 3326.39 crore for payment of DESU Dues for GNCT of Delhi and Rs 90.21 crore for waiver of inrest of NEEPCO \*\* The Non-Plan expenditure includes a onetime payment of Rs 536.30 crore for lahori Nagpala HEP in second

\*\* The Non-Plan expenditure includes a onetime payment of Rs 536.30 crore for lahori Nagpala HEP in second quarter

1.15 The budgetary allocation of the Ministry of Power for 2015-16 was Rs 6,799.74 crore, which at the stage of RE was increased to Rs. 8,084.37 crore due to excess requirement of fund under IPDS, PSDF and NHPC schemes. The actual expenditure as on 29.02.2016 is Rs. 6,585.71 crore.

1.16 When the Committee desired to know the heads which showed shortfalls or excess expenditure during the year 2015-16, the Ministry, in their written reply, have furnished the following information:

"The budgetary allocation of the Ministry of Power for 2015-16 was Rs.6799.74 crore against which the actual expenditure was Rs.6585.71crore as on 29.02.2016. The Major Heads which showed shortfalls or excess expenditure in 2015-16 and the reasons for improper utilization against the allocation in the heads are given as under:-

S.No.	Scheme	BE 2015-16	RE 2015-16	Actual as on 29.02.2016	Reasons for shortfall of excess in expenditure
1	2	3	4	5	6
1	Secretariat-Economic Services	1.24	1.24	1.18	Fund will be exhausted till the close of FY.
2	Central Electricity Authority	30.00	11.73	1.07	The reduction in RE is mainly due to less requirement of funds under its different schemes, viz. 'Upgradation of IT facility in CEA',Computerization of PTCC process', 'Basin wise review of HE potential in the country etc.
3	DDUGJY/RGGVY	4500.00	4500.00	4452.66	Almost full BE/RE has been utilized and the rest amount is expected to be utilized till the close of FY.
4	NPTI	40.00	30.60	23.60	The less expenditure and reduction in RE is due to less requirement of fund under its sub-schemes 'Setting up of National Power Training Institute at Alappuzha, Kerala' and 'Renovation, Modernization and Augmentation of Training infrastructure of nine Institutes of NPTI'.
5	CPRI	125.00	42.00	29.22	The saving is due to unexpected delays in the process of completion of procurement of equipment, including import.
6	Bureau of Energy Efficiency	50.00	45.00	36.43	The RE was reduced to accommodate the requirement of fund in other scheme IPDS of MoP.
7	Funds for evaluation Studies	0.30	0.30	0.00	Small scheme. No claims for release received from any division.

8	Comp. Award Scheme for Power Sector	1.00	0.50	0.13	Nominal Saving
9	Assistance to FOR for capacity Building	1.00	1.00	0.89	Nominal saving
10	IPDS/ R-APDRP	600.00	1002.05	570.20	Many proposals of release are in pipeline and it is expected that complete fund will be utilized upto close of FY
11	Energy Conservation	60.00	55.00	54.82	The RE was reduced to accommodate the requirement of fund in other scheme IPDS of MoP. The RE allocation has been completely exhausted.
12	NEEPCO	75.00	27.70	27.70	The RE was reduced to accommodate the requirement of fund in other scheme IPDS of MoP. Though the RE has been completely exhausted.
13	NHPC	200.00	300.00	300.00	Excess fund was required for Kishanganga HEP of NHPC.
14	National Electricity Fund	20.00	7.00	6.51	The scheme requires a number of mandatory conditions to be fulfilled. Very few claims received, thus expenditure was low.
15	THDC	30.00	30.00	30.00	No surrender of fund.
16	Transmission System AP & Sikkim	150.00	150.00	150.00	No surrender of fund.
17	Transmission line Srinagar to Leh	250.00	250.00	250.00	No surrender of fund.
18	Financial support for Discoms	74.20	1.00	0.00	The scheme requires a number of mandatory conditions to be fulfilled as Discoms have not been able to fulfill the conditions, no funds could be utilized. None of the participating States have filed any claims. Therefore, only a token provision was proposed at RE stage keeping in view the cut in budget allocation for MoP at RE stage.
19	Power System improvement project for NER(2552)	250.00	250.00	158.44	The expenditure position is expected to improve till the close of FY as the release proposal is in pipeline
20	Green Energy CORRIDOR	1.00	1.00	0.00	Token provision was kept but the scheme could not materialize in the financial year, therefore, is expected to be surrendered.

21	(i). Development of Power Systems- NLDC	300.00	175.00	0.00	The RE was reduced as per the requirement of fund under the scheme. The fund allocated in RE is in process of release.
	(ii). Support to DISCOM for purchase of Gas based Power	0.00	1200.00	492.86	The RE was taken through supplementary. The remaining fund allocated is in process of release.
22	Smart Grid	40.00	2.25	0.00	RE was reduced as per actual requirement. Allocation in RE likely to be spent in full.
23	Power System Operation Company (POSOCO)	1.00	1.00	0.00	Token provision was kept but the scheme could not be materialized in the financial year, therefore, is expected to be surrendered.
	Total	6799.74	8084.37	6585.71	

# IV. <u>12<sup>TH</sup> FIVE YEAR PLAN</u>

1.17 The 12<sup>th</sup> Five Year Plan (2012-17) component has been approved in the 57<sup>th</sup> Meeting of National Development Council (NDC) held on 27<sup>th</sup> December, 2012. The 12<sup>th</sup> Plan has identified 25 monitorable targets which *inter alia* contain a monitorable target for power sector to provide electricity to all villages and reduce AT&C losses to 20% by the end of the 12<sup>th</sup> Five Year Plan.

1.18 The erstwhile Planning Commission assessed an Outlay of Rs. 4,40,795.84 crore during the 12<sup>th</sup> Plan period for the Central Sector comprising of Rs. 3,86,516.84 crore of Internal & Extra Budgetary Resources (IEBR) to be raised by the CPSUs themselves and Rs. 54,279.00 crore of Gross Budgetary Support (GBS). The actual utilization upto 31.01.2016, during the 12<sup>th</sup> Plan period is Rs. 2,14,408.08 crore, including Rs. 1,95,537.69 crore as IEBR and Rs. 18,870.39 crore as GBS.

1.19 The CPSU-wise and schemewise break-up of financial performance so far in the 12<sup>th</sup> Plan is as under:-

					Rs.In Crore
SI No.	Activity/ Organization		IEBR	GBS	Total
А	Investment in PSUs				
1		Estimates	219612.50	0.00	219612.50
I		Achievements	83142.54	0.00	83142.54
2	NHPC	Estimates	27312.04	2056.91	29368.95
2		Achievements	9645.31	1535.36	11180.67
2		Estimates	102034.00	0.00	102034.00
3	FUWERGRID	Achievements	83646.00	0.00	83646.00
1		Estimates	14509.65	0.00	14509.65
4		Achievements	9287.70	0.00	9287.70
Б	THDC India Ltd	Estimates	6781.86	516.20	7298.06
5	THUC India Ltd	Achievements	1891.99	205.24	2097.23

6		Estimates	10400.00	0.00	10400.00
0	SJVINL	Achievements	3054.20	0.00	3054.20
7	NEEDCO	Estimates	5866.79	406.18	6272.97
	NEEFCO	Achievements	4869.95	289.41	5159.36
		Estimates	386516.84	2979.29	389496.13
	Total (A)	Achievements	195537.69	2030.01	197567.70
В	MoP Schemes (other than CPSUs)				
1	Rajeev Gandhi Grameen Vidyutikaran Yojana	Estimates	0.00	23397.44	23397.44
	(RGGVY)	Achievement	0.00	6510.87	6510.87
2	Restructured Accelerated Power Development Reforms Programme (R-	Estimates	0.00	10830.00	10830.00
	APDRP)	Achievement	0.00	2478.44	2478.44
	Deen Dayal Upadyaya	Estimates	0.00	2500.00	2500.00
3	Gram Jyoti Yojana (DDUGJY)	Achievement	0.00	4711.80	4711.80
	Integrated Power	Estimates	0.00	0.00	0.00
4	Development Scheme (IPDS)	Achievement	0.00	619.54	619.54
5	National Electricity Fund	Estimates	0.00	3601.00	3601.00
	(NEF)	Achievement	0.00	7.51	7.51
6	Strengthening of Transmission System in the States of Arunachal	Estimates	0.00	3014.00	3014.00
	Pradesh & Sikkim	Achievement	0.00	250.00	250.00
	Energy	Estimates	0.00	2499.91	2499.91
7	Conservation+Bureau of Energy Efficiency	Achievement	0.00	296.80	296.80
8	220 Kv Transmission Line from Srinagar to Leh via	Estimates	0.00	1628.00	1628.00
	Kargil	Achievement	0.00	583.54	583.54
9	Central Power Research	Estimates	0.00	1368.90	1368.90
	Institute (CPRI)	Achievement	0.00	137.94	137.94
40	Financial Debt	Estimates	0.00	1000.00	1000.00
10	Restructuring of DISCOMs	Achievement	0.00	0.00	0.00
11	Other MoP Schemes	Estimates	0.00	1460.46	1460.46
		Achievement	0.00	1243.94	1243.94
	Total(B)	Estimates	0.00	51299.71	51299.71
		Achievement	0.00	16840.38	16840.38
	Total GBS (A) + (B)	Estimates	386516.84	54279.00	440795.84
		Achievement	195537.69	18870.39	214408.08

Achievement is as on 31.01.2016 \*The scheme of RGGVY has been subsumed in the new scheme namely Deen Dayal Upadyaya Gram Jyoti Yojana (DDUGJY) approved during 2014-15.

\*\* The scheme of R-APDRP has been subsumed in the new scheme namely Integrated Power Development Scheme (IPDS) approved during 2014-15.

1.20 The details of yearly outlay and expenditure of Gross Budgetary Support during the

#### 12<sup>th</sup> Plan period is given at **Annexure- II**

1.21 When the Committee asked about the reasons for the yawning gap between the

planned and the actual expenditure so far during the 12<sup>th</sup> Plan period, the Ministry have

stated as under:

"It is admitted that the actual spending both under the IEBR and GBS has been much less than the 12<sup>th</sup> Plan outlay. The basic reason for the slow pace of expenditure against the GBS is that many of the major schemes could take off only from the year 2014-15 onwards due to the fact that the due diligence process of appraisal and approval could get completed only in the latter half of the financial year 2013-14 and during 2014-15. It may also be appreciated that while the target is for the entire Five Year Plan period, the actuals accounted for are only for four years. It is expected that the trend of better performance over the previous two years would continue and performance will further improve during 2016-17. It is submitted that the Plan expenditure for FY 2015-16 as on 31<sup>st</sup> March 2016 is Rs. 7827 cr. and the cumulative figures till the end of fourth year of the 12<sup>th</sup> Five Year Plan is Rs. 20482 cr.

As regards the expenditure against IEBR, it is submitted that the Five Year Plan projects are made by NITI AAYOG (erstwhile Planning Commission) on the basis of the recommendations contained in the Working Group Reports and with reference to the shelf/pipeline of projects in the following three broad categories: (i) On-going projects, including projects spilled over from the previous Plan (11<sup>th</sup> Plan); (ii) Renovation & Modernisation; and (iii) New Projects, including investment in Joint Ventures, coal mining and other schemes. While there could be reasonable certainty about the quantum and phasing of CAPEX in respect of the projects falling in the first two categories, the same cannot be said about the new projects. The investment/CAPEX in new power projects are linked to several prerequisites such as availability of land, fuel(coal/gas)linkage, forest/environmental clearances, other statutory clearances, etc. Some of these issues may be relevant in the case of on-going projects too. Delay(s) in fulfilling these pre-requisites impact the quantum and phasing of CAPEX against these projects."

1.22 When the Committee raised the issue of non-performance of the National

Electricity Fund, wherein, against the allocation of Rs. 3,601 crore, only Rs. 7.51 crore

has been utilized so far in the 12<sup>th</sup> Plan, the Ministry have stated as under:

"The Scheme provides subsidy on interest rates for capital loans for distribution infrastructure works. Objective of the scheme is to promote capital investment in distribution sector by providing interest subsidy linked with reform measures on loans from Banks/FIs, State Power Utilities, Distribution Companies (DISCOMS) – both in Public and Private sector. Rs 8,466/- Cr as interest subsidy is expected to be released during the loan tenure of max. 14 years on achievement of eligibility criteria. The pre-eligibility conditions are linked to reform measures to be taken by the Discoms, i.e.,Operationalization of SERC, Formulation of business plan, Reorganization of SEB, Release of Subsidy by State Government, Audited Annual Accounts, Timely filing of tariff petition, etc. Release of Interest subsidy of 3%-7% is linked with achievement of reduction in AT&C losses, reduction in gap-on subsidy received basis, return on equity in tariff, Multiyear tariff (MYT) notification of Discom, etc.

In view of delay incompliance of conditions precedent, the claims from utilities are not being submitted in time & in regular manner. It may further be noted that the scheme is only for interest subsidy after achieving certain performance parameters by the utility. The project cost or the investment by the utilities under the scheme is much larger (i.e. more than Rs.25000 crore). Therefore, with a reasonably small budgetary support, a large amount of investment is being encouraged for betterment of infrastructure in distribution sector.

So far, 17 Nos. of proposals have been evaluated by the Steering Committee of NEF and 9 cases were found eligible for release of interest subsidy of Rs.16.92 crore (Rs.7.51 crore + Rs.9.41 crore)."

1.23 When the Committee asked for the reasons for the poor utilization of fund under

CPRI, a premier power sector institute of research, wherein only Rs. 137 crore has

been spend against the allocation of Rs. 1,368 crore, the Ministry have stated as

under:

"Central Power Research Institute (CPRI) has drawn Rs.175.21 crore as on date, which includes Rs.122.2889 crore for the 4 major capital projects of 12<sup>th</sup> Plan, during the 12<sup>th</sup> Five Year Plan period. The details of approved 12<sup>th</sup> Plan Projects (approval accorded in 2014 and 2015 only) are as given below:

SI No	Details	Date of Approval/ Sanction	Out lay in Rs. Crore	
1	Augmentation and New facilities Projects	February 2014	105.90	
2	Research & Development Schemes of CPRI	June 2014	80.00	
3	Modernization (Augmentation of High Power Short Circuit Test Facilities by installation of two additional 2500 MVA Generators and associated equipment)	January 2015	640.00	
4	Establishment of New Test Facilities	January 2015	356.10	
	Total in Rs. Cror	1182.00		

2. In addition, procurement of specialized scientific equipment required for setting up of test facilities at CPRI is taking more time than anticipated due to scarce suppliers, long gestation period, etc.

3. Many of the project components also involve construction of Laboratory buildings with special designs, which are handed over to CPWD, also resulting in more than anticipated time.

4. Installation of two additional 2500 MVA Short Circuit Generator project alone costs Rs.509.00 crore. Once the process of procurement of Generators reach ordering stage, there will be a quantum jump in the expenditure as cost of each Generator is around Rs.150-200 crore. This is expected to be realized during 2016-17."

1.24 On being asked by the Committee as to why the Financial Debt Restructuring of

Discoms failed as nothing could be utilized out of the Rs. 1,000 crore allocated for the

same, the Ministry have stated as under:

"The scheme for Financial Restructuring of State Distribution Companies (Discoms) for achieving their financial turnaround by restructuring their short term

liabilities with support through a Transitional Finance Mechanism from Central Govt. was notified by Ministry of Power on 5<sup>th</sup> October 2012 after CCEA approval.

The scheme had been prepared keeping in view the fragile health of utilities and State Government, coupled with serious systemic deficiencies in the working of State Discoms. The scheme contained immediate/continuing and short term measures required to be taken in a time bound manner by the Discoms and State Governments. These measures include Financial Restructuring, Tariff Setting & Revenue Realization, Subsidy, Metering, Audit & Accounts and Monitoring.

As per the Scheme, Central Govt. would provide incentive by way of grant equal to the value of the additional energy saved by way of accelerated AT&C loss reduction beyond the loss trajectory specified under RAPDRP and capital reimbursement support of 25% of principal repayment by the State Govt. on the liability taken over by the State Government under the scheme.

None of the States/Discoms could fulfill the eligibility criteria/conditions precedent to drawal of funds/central grant under the scheme. A new scheme, *viz*. Ujjawal Discom Assurance Scheme (UDAY) has since been launched with the objective of financial turnaround of the Discoms."

1.25 A capacity addition target of 88,537 MW, excluding 30,000 MW of Renewable Energy

Sources, has been fixed by the erstwhile Planning Commission for the 12<sup>th</sup> Plan period. The details are as under:

(Figures in MW)

		THE	RMAL BRE	AKUP	TOTAL		TOTAL	
	HIDRO	COAL	LIGNITE	GAS/LNG	THERMAL	NUCLEAR		
CENTRAL SECTOR	6004	13800	250	827.6	14878	5300	26182	
STATE SECTOR	1608	12210	0	1712.0	13922	0	15530	
PRIVATE SECTOR	3285	43270	270	0.0	43540	0	46825	
ALL- INDIA	10897	69280	520	2539.6	72340	5300	88537	

1.26 The Capacity Addition target of 78,000 MW was set for the 11<sup>th</sup> Five Year Plan. During Mid Term Appraisal of 11<sup>th</sup> Five Year Plan, the said target was revised to 62,374 MW. However, at the end of the Plan, the actual achievement was 54,964 MW.

1.27 The details of capacity addition – target and achievement – in the  $11^{\text{th}}$  Plan is tabulated below:

	Original Target				Actual Capacity Addition				Slippage into XII Plan			
	Ther mal	Hydr o	Nucl ear	Total	Therm al	Hydr o	Nuc lear	Total	Therm al	Hydr o	Nucl ear	Total
Centr al	24840	8654	3380	36874	12790	1550	880	15220	12050	7104	2500	21654
State	23301	3482		26783	14030	2702		16732	9292	780		10072
Privat e	11552	3491		15043	21720	1292		23012	-510	2199		1689
Total	59693	15627	3380	78700	48540	5544	880	54964	20832	1008 3	2500	33415

1.28 A capacity addition target of 88,537 MW, excluding 30,000 MW of Renewable Energy Source, was finalized by the erstwhile Planning Commission for the 12<sup>th</sup> Plan, out of which 75,195.7 MW capacity has been added till 29.02.2016 during the 12<sup>th</sup> Five Year Plan. The Sector-wise and fuel-wise break up of the 12<sup>th</sup> Plan capacity addition target of 88,537 MW and achievement is given as under:-

*As on 29.02.2016 (In M									
Sector	Sector Thermal		Hydro		Nuclear		Total		%
	Target	Ach.	Target	Ach.	Target	Ach	Target	Ach.	
Central	14878	11228.1	6004	2464.02	5300	1000	26182	14692.1	56.1
State	13922	14569.1	1608	672	0	0	15530	15241.1	98.1
Private	43540	44667.5	3285	595	0	0	46825	45262.5	96.6
All India	72340	70464.7	10897	3731.02	5300	1000	88537	75195.7	84.9
%		97.4		34.2		18.9		84.9	

1.29 When the Committee, taking into account that the moderate target set for the Central Sector for generation capacity addition, raised the issue of non-achievement of targets, the Secretary, Power, during the sitting of the Committee, explained as under:

"In the Central sector, we may be falling short of the target, but the issue is that if you really wanted to do a target of 88,000 MW for the Five Year Plan and we are achieving or over-achieving, largely it has come from the State sector and the private sector".

1.30 When the Committee asked about the difficulties being faced in the generation capacity addition programme, the Ministry stated as under:

> "The major difficulties faced in Capacity Addition programme of thermal projects are as under:

- Delay in supplies by BHEL,
- Poor performance by civil contractors,
- Delay in land acquisition,
- Slow progress of civil works,
- Contractual disputes, etc. •

The difficulties faced by the developers for timely completion of hydro projects are as under:-

- Delay in Land Acquisition  $\geq$
- $\triangleright$ Environment and Forest issues
- **Rehabilitation & Resettlement issues**  $\triangleright$
- $\triangleright$ Natural Calamities
- AAAAA Law & order problem & Local issues
- Contractual problems
- Geological uncertainties
- Difficult Terrain & Poor Accessibility
- Funds constraints
- Force Majeure Risk
- Inter-State issues"

1.31 In regard to remedial measures being taken by the Government to address the issues

relating to generation capacity addition, the Ministry have stated as under:

"In order to ensure that the projects are commissioned on time, the Government has taken the following steps:-

• Central Electricity Authority (CEA) is monitoring the hydro power projects (above 25 MW) in pursuance of Section 73 (f) of Electricity Act, 2003. The progress of each project is monitored continuously through site visits, interaction with the developers & other stakeholders. Chairperson, CEA, holds review meetings with the Power Projects Monitoring Panel (PPMP) and monitoring divisions of CEA.

• Power Project Monitoring Panel (PPMP), set up by the Ministry of Power, independently follow up and monitors the progress of the hydro projects.

• Ministry of Power also reviews the progress of ongoing Hydro electric projects regularly with the officers concerned of CEA, equipment manufacturers, State Utilities / CPSUs / Project developers, etc."

# V. MINISTRY OF POWER SCHEMES (FUNDED THROUGH GBS)

# A. Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY)

1.32 The Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) is the new 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.

1.33 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<sup>th</sup> and 13<sup>th</sup> Plans shall be carried forward under DDUGJY.

1.34 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 regrouping 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 regrouping 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 Gol 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.

1.35 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.

1.36 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, Government of India.

1.37 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.

1.38 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 Fibre 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.
- To ensure timely completion and effective implementation, provision for additional grant up to 15% (5% for special category states) has been made 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.
- 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.

1.39	The Funding	Mechanism f	or DDUGJY	will be as g	iven under:
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Agonov	Nature of	Quantum of support (Percentage of project cost)			
Agency	support	Other than Special	Special Category		
		Category States	States #		
Govt of India	Grant	60	85		
Discom Contribution	Own Fund	10	5		
Lender (Fls/ Banks)	Loan	30	10		
Additional Grant from	Grant	50% of total loan	50% of total loan		
GOI on achievement of		component (30%) i.e.	component (10%)		
prescribed milestones		15%	i.e. 5%		

(including additional	Grant	75%	90%	
grant on achievement of				
prescribed milestones)				#Special

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

1.40 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,

1.41 The DDUGJY has been approved with an estimated outlay of Rs. 43,033 crore, including a budgetary support of Rs. 33,453 crore from Government of India, during the entire implementation period. The year-wise allocation of budgetary support approved by CCEA is as under:

(Rs. crore)

Year	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	Total
Subsidy	500	3500	6500	8500	7500	2500	2000	2453	33453

1.42 Total outlay for the scheme, including Rural Electrification (RE), is as under:

(in Rs. Crore)

	Outlay	Subsidy
DDUGJY(new)	43,033	33,453
RE component	32,860	29,574
Total Outlay	75,893	63,027

1.43 In regard to status of implementation of the scheme, the Ministry have provided the

following information:

### "Status of Implementation of DDUGJY (As on 29.02.2016)

- As on 29.02.2016, Projects in 29 States/UTs amounting to Rs.41100.45 crore have been sanctioned.
- Subsidy of Rs. 1934.52 crore has been released by MOP to REC against these projects.
- The States are in the process of tendering and award of projects.

## Status of implementation of RE Component (As on 29.02.2016)

During X, XI & XII Plan, Ministry of Power has sanctioned 921 projects involving electrification of 1,19,877 un-electrified villages, intensive electrification of 5,91,796 partially electrified villages and providing electricity connections to 397.44 Lakh Below Poverty Line households with total project cost of Rs. 66,464.01 Crore. Cumulatively (as on 29.02.2016), electrification works in 1,14,235 (95%) un-electrified

villages, intensive electrification in 3,47,032 (59%) villages has been completed and free electricity connections to 232.00 Lakh (58%) BPL households have been released.

Cumulatively, total capital subsidy of Rs. 35680.70 cr. has been released by MOP to REC against these projects."

1.44 The Ministry have informed that electrification of 18,452 un-electrified villages (as on

01.04.2015) is targeted by 01.05.2018. Year-wise targets proposed for electrification of un-

electrified villages are as under:

Year	2015-16	2016-17	2017-18	Total
Target	5,686	8,360	4,406	18,452

1.45 The details regarding number of villages electrified during the last four years:

Year	2012-13	2013-14	2014-15	2015-16
Achievement	2587	1197	1405	6774

1.46 In reply to the specific query of the Committee as to how many villages are still there to be electrified and the number of BPL households to be provided electricity connections and the timeline provided for the same, the Ministry have stated as under:

"As on 01.04.2015, the States had reported 18452 un-electrified villages in the country. During 2015-16, electrification of 7108 un-electrified villages has been completed as on 31.03.2016. Thus, there are 11344 un-electrified villages yet to be electrified as on 31.03.2016, of which 434 villages have been reported uninhabited.

397.44 Lakh BPL households were proposed to be provided free electricity connections under rural electrification component of the scheme (erstwhile RGGVY), as on 29.02.2016; connections to 232.00 Lakh BPL households have been released by the States.

The target of electrifying un-electrified villages will be achieved within stipulated time line i.e. by May 2018. The target for providing connections to BPL households is likely to be achieved by 2019."

1.47 When the Committee raised the issue of disputes in regard to the number of remaining

un-electrified villages, it was stated by the Ministry as under:

"All remaining un-electrified villages as per Census 2011 as reported by the States, irrespective of population and size of villages, will be electrified by May 2018

The figures regarding electrification of villages are provided by the States and verification of details provided by States is in process through 'Gram Vidyut Abhiyanta' (GVA) deployed in the States under the scheme. The details regarding electrification of village and verification by GVAs are updated regularly through Mobile App – 'GARV'.

1.48 The Secretary, Power, during the sitting of the Committee, while clarifying the issue of

remaining villages under the scheme, deposed before the Committee as under:

"By this date  $(31^{st} \text{ March}, 2015)$ , 18452 villages were left out. These are census villages. They do not have any criteria of population and whether they have 10 persons or 100 persons, all are covered. When the DPR comes, the State Government gives a certificate saying that as a first priority under DDUJJY, they are covering all the un-electrified villages. There is not a ingle village for which we are not making provision. After that rest of the amount is disbursd. When state government says that all of the villages have been covered, we have made provisions for them, only after then state government issues certificate. The UP Government had indicated that as on  $31^{st}$  March, 2015 they had 1529 villages un-electrified.

1.49 The State-wise status of electrification of villages as provided by the Ministry is enclosed at **Annexure – III.** State-wise details of electrification of un-electrified villages, intensive electrification of already electrified villages & connections released for BPL Households under erstwhile RGGVY is enclosed at **Annexure – IV.** 

1.50 When the Committee desired to know about the status of metering at feeders, distribution, transformers and consumer level in rural areas, the following information was furnished by the Ministry:

(a) Status of metering of 11KV feeders in rural areas:

	Unmotorod	Defective	Unmetered	Unmetered
Feeders	Feeders	meters	+ Defective	+ Defective
			meters	(%)
88678	8450	5331	13781	15.54

Source : CEA Report, October 2014.

(b) Status of metering of Distribution Transformers\*

				Unmetered
No. of DTc	Unmetered	Defective	Unmetered +	+
	DTs	meters	Defective meters	Defective
				(%)
7100628	4266017	436794	4702811	66.23

Source : CEA Report, October 2014, \*Bifurcation of rural and urban areas not available in the report.

(c) Status of metering of consumers in rural areas

Category	No. of Consumers (Lakh)	Unmetered consumers (Lakh)	Defective meters (Lakh)	Unmetered + Defective meters (Lakh)	Unmetered + Defective (%)
Domestic	893.26	64.47	42.67	107.14	11.99
Agricultural	190.36	125.82	9.55	135.37	71.11
Total	1083.62	190.29	52.22	242.51	22.38

Source : CEA Report, October 2014.

1.51 When the Committee asked for the targets fixed under the head and the time schedule for achieving the same, the Ministry have stated that for metering of feeders, distribution transformers and consumers, an amount of Rs. 3935.18 crore has been sanctioned to 29 States/UTs under DDUGJY projects.

1.52 On being asked by the Committee about the monitoring mechanism for implementation

of this scheme, the Ministry, in their written reply, have stated as under:

"Utility shall create a dedicated team for implementation of projects at district and Utility/State level, including necessary manpower and requisite infrastructure to ensure smooth implementation and monitoring. An officer of the rank of Chief Engineer/General Manager or above, will be designated as Nodal Officer from the dedicated team at utility/State level. The Nodal Officer shall be responsible for implementation of scheme in accordance with the prescribed guidelines, providing all necessary information including physical & financial progress related to the projects and arrange to get relevant orders/clearances from the State Government.

An appropriate Project Management Agency (PMA) shall be appointed to assist them in project management ensuring timely implementation of the project. 100% grant will be provided by Government of India towards expenditure incurred on Project Management Agency (PMA) up to 0.5% of cost of works.

The State Level Standing Committee (SLSC) under the Chairmanship of Chief Secretary will monitor progress at State level and resolve issues relating to implementation, viz. allocation of land for sub-stations, right of way, forest clearance, railway clearance, safety clearance, etc.

The District Electricity Committee under the Chairmanship of the Seniormost Member of Parliament of the District will regularly monitor the implementation of the scheme and resolve the issues affecting the progress.

The nodal agency, Rural Electrification Corporation Limited (REC) will monitor implementation of scheme through its project offices at the field level. REC is developing a web enabled Mobile App, similar to the Mobile App – 'GARV' already available for village electrification, for near real time up-dation of progress under the scheme by the implementing agencies of States.

The inter-ministerial Monitoring Committee on DDUGJY headed by the Secretary, Ministry of Power, Govt. of India will also monitor implementation of scheme at Central level. Besides this, progress would also be reviewed in Review, Planning and Monitoring (RPM) meeting of Ministry of Power with States / Power Utilities on monthly basis."

1.53 In regard to steps taken to prevent time overrun and cost overrun, it has been stated that a robust monitoring mechanism has been established for close monitoring of implementation of the scheme to ensure timely completion of projects under the scheme. As regards cost overruns, the project cost approved by the Monitoring Committee or the award cost, whichever is less, shall be the eligible cost for determining the grant from Govt. of India. Any cost overrun after approval of the project due to any reason whatsoever shall not be eligible for any grant and shall be borne by the utility/State Government.

1.54 In regard to perceived benefits of metering, it has been stated that States are in the process of award of contract for execution of works sanctioned under the scheme. After implementation of the scheme, metering component in particular, the Utilities would be in a position to carry out energy audit at feeder and distribution transformer level. The energy audit would facilitate identifying high AT&C loss pockets and initiate requisite interventions for reduction of AT&C losses resulting in financial benefits to the Utilities.

# **B.** Integrated Power Development Scheme (IPDS)

1.55 The Integrated Power Development Scheme (IPDS) is a new scheme formulated on 20<sup>th</sup> 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 12<sup>th</sup> and 13<sup>th</sup> Plans by carrying forward the approved outlay of R-APDRP to IPDS.

1.56 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.

1.57 The erstwhile scheme of R-APDRP has got subsumed into IPDS along with its outlay. In regard to budgetary allocation for IPDS for the 12<sup>th</sup> Plan, the Ministry have furnished the following information:

		Budget Compon	ents [Rs	s.crore]		
Financial Year	Loan to PFC under R-APDRP [Other States]	Loan to PFC under R-APDRP [NE States]	Grant	IPDS Grant [Other States]	IPDS Grant [NE States]	Total [Rs.crore]
2012-13	1015.29	202.16	17.04	-		1234.49
2013-14	582.50	57.50	8.70	-		648.70
2014-15	445.79	132.68	16.78	50	-	645.26
2015-16	534.65	133.17		266.32	67.59	1001.73
2016-17	2384.19	197.09		2761.96	156.75	5500
TOTAL	XII Plan					9030.18

1.58 In regard to achievements under the scheme, it was stated by the Ministry that the targets for FY12-13, FY13-14 & FY14-15 have already been achieved. Regarding targets for FY15-16, out of Rs.1001.73 crore, Rs. 848.48 crore have already been utilized and release of balance funds is under process and will be utilized fully. Funds as proposed in Budget for FY16-17 for IPDS(Grant & Loan) are also likely to be utilized fully, considering sanctions of about Rs.25,000 crore under IPDS and huge fund requirement by State utilities under R-APDRP(subsumed under IPDS).

1.59 When the Committee desired to know the reason for less release of fund under IPDS during the year 2015-16, the Secretary, Power, deposed before the Committee as under:

"IPDS was launched in December 2014, but if you look at the current year (2015-16) Budget provision, only Rs. 200 crore was given for IPDS. This is the reason we could not release much fund. With a lot of persuasion and with the help of the hon. Committee and Ministry of Finance's help, the budgetary provision of IPDS next year is Rs. 5,500 crore. So, there is a jump in it from Rs. 200 crore to Rs. 5,500 crore."

1.60 When the Committee desired to know the objective of IPDS and how these differ from R-APDRP, the Ministry, in their written reply, have stated as under:

"The objectives of IPDS are Strengthening of sub-transmission and distribution networks in the urban areas; Metering of distribution transformers / feeders / consumers in the urban areas and continue IT enablement of distribution sector in urban area.

The objective of Restructured Accelerated Power Development & Reforms Programme (R-APDRP) was demonstrable performance in sustained loss reduction through establishment of reliable and automated systems for energy accounting and auditing and distribution strengthening projects.

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R-APDRP was more restrictive as towns with 30,000 (10,000 for special category States) population could be eligible for Gol assistance. IPDS is comprehensive and inclusive as all urban towns, including private utilities, are eligible for Gol assistance. IPDS builds upon the works already done under R-APDRP."

1.61 In regard to scope of work, it has been stated by the Ministry that the scheme will cover works relating to strengthening of sub-transmission & distribution system, including provisioning of solar panels, metering of distribution transformers/feeders/consumers in the urban areas, and IT enablement of distribution sector. Completion of optical fibre missing links to connect all the 33kV or 66kV grid sub-stations under the National Optical fibre Network [NOFN] is also envisaged under the scheme. A national power Data Hub at CEA shall also be established under the scheme.

1.62 The Ministry informed that all Discoms, including private sector Discoms and State Power Departments, will be eligible for financial assistance under the scheme. In case of private sector Discoms shere the distribution of power supply in the urban areas is with them, the project 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.

1.63 It was further stated that a Project Management Agency (PMA) will be appointed by the utility for monitoring and ensuring timely implementation of the project. 100% grant will provided by Government of India towards expenditure incurred on Project Management Agency (PMA) as per provision in the scheme which will be limited to 0.5% of cost of works.

1.64 Projects under the scheme will be completed within a period of 24 months from the date of issue of Letter of Award (LoA) by the utility. In case the Discoms/Power Departments are not able to complete the projects within stipulated time period due to circumstances beyond their control, the proposed Monitoring Committee will be authorized to grant time extension based on merits in exceptional cases on a case to case basis.

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1.65 In regard to funding mechanism proposed under IPDS, the Ministry has provided the following information:

		Quantum of support	
		( percentage of proje	ct cost)
Agency	Nature of	Other than Special	Special Category
	support	category States	States#
Government of India	Grant	60	85
Discom Contribution	Own fund	10	5
Lender (Fls/Banks)	Loan	30	10
Additional Grant	Grant	50% of total loan	50% of total loan
from GOI on		component (30%)	component (10%)
achievement of		i.e. 15%	i.e. 5%
prescribed			
milestones			
Maximum Grant by	Grant	75%	90%
GOI (including			
additional grant on			
achievement of			
prescribed			
milestones)			

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

1.66 When the Committee asked for the details of the physical achievements of IPDS so far

and whether these are on the expected lines, the Ministry have stated as under:

"Achievements under IPDS are as follows:

- a. Projects worth Rs.24,837 crore have been sanctioned for 29 States/UTs covering 3486 towns.
- b. Physical implementation of the scheme is yet to start as preparatory work of demands aggregation and finalization of vendors for bulk purchase is being conducted. State utilities would start physical progress after March 2016.

The scheme was launched in December 2014 and guidelines were released on 31<sup>st</sup> December'14. Projects under the scheme in almost entire India have been sanctioned and project award is to make headway after March'16. The progress of the scheme is satisfactory and in line with the available finances."

## VI. DEVELOPMENT OF POWER SECTOR

1.67 The details of the total installed power generation capacity in the country as on28.02.2016 is given as under:

								(in MW)		
	Mode wise breakup									
Sector	ctor Thermal				Nuclear	Hydro	RES			
	Coal	Gas	Diesel	Total	Nuclear	(Renewab le)	(MNRE)			
Central	49980.00	7555.33	0.00	57535.33	5780.00	11531.42	0.00	74846.75		
State	60550.50	6975.30	438.57	67964.37	0.00	28052.00	1934.22	97950.59		
Private Sector	65327.38	9978.00	554.96	75860.34	0.00	3120.00	36887.29	115867.63		
Total	175857.88	24508.63	993.53	201360.04	5780.00	42703.42	38821.51	288664.97		

**1.68** Power Supply position vis-à-vis the total demand in the country during the last five years is tabulated below:-

	Energy R	equirement	Peak Demand / Peak Met (MAX)					
Date	Requirement	Availability	Surplus / De	eficit (-)	Peak Demand	Peak Met	Surplus /	Deficit (-)
	MU	MU	MU	%	MW	MW	MW	%
2010-11	8,61,591	7,88,355	-73,236	-8.5	1,22,287	1,10,256	-12,031	-9.8
2011-12	9,37,199	8,57,886	-79,313	-8.5	1,30,006	1,16,191	-13,815	-10.6
2012-13	9,95,557	9,08,652	-86,905	-8.7	1,35,453	1,23,294	-12,159	-9.0
2013-14	10,02,257	9,59,829	-42,428	-4.2	1,35,918	1,29,815	-6,103	-4.5
2014-15	10,68,923	10,30,785	-38,138	-3.6	1,48,166	1,41,160	-7,006	-4.7
2015-16								
(April-February	10,17,954	9,95,981	-21,973	-2.2	1,53,366	1,48,463	-4,903	-3.2
2016)								

1.69 As per the 18<sup>th</sup> Electric Power Survey (EPS) of India conducted by the Central Electricity Authority, the Electric Energy Requirement (EER) and Annual Peak Electric Load (APEL) of the country for the 12<sup>th</sup> Five Year Plan period and beyond have been assessed. The forecasting of electricity demand is made to carry out realistic integrated planning exercises for addition of new electricity generation capacity, transmission and distribution systems and fuel requirement. As per 18<sup>th</sup> EPS, the All India electrical energy requirement (MU) and peak electric load (MW) for 12<sup>th</sup> Plan is given below:

Year	EER (MU)	APEL (MW)
2012-13	1007694	143967
2013-14	1084610	156208
2014-15	1167731	169491
2015-16	1257589	183902
2016-17	1354874	199540

1.70 On being asked by the Committee about the steps being taken by the Government to meet these demands, the Ministry stated as under:

"The steps being taken by the Government to meet the gap, , are:

- (i) Capacity addition of 1,18,537 MW (including 88,537 MW conventional and 30,000 MW renewable) during the 12<sup>th</sup> Plan, i.e. by 2016-17. As against this, about 74871 MW from conventional sources has been achieved till 20.02.2016 and about 14,612 MW from renewable sources till 31.1.2016.
- (ii) Construction of 1,07,440ckm transmission lines and setting up of 2,82,740 MVA transformation capacity during the 12<sup>th</sup> Plan, i.e. by 2016-17. As against this, 80501 ckm of transmission lines and 228390 MVA of transformation capacity have been achieved till 31<sup>st</sup> January, 2016.
- (iii) Government of India has taken initiative to prepare State specific Action Plans for providing 24X7 Power For All (PFA) in partnership with the States.
- (iv) Two new schemes are being implemented by the Government of India, namely, Deendayal Upadhyaya Gram Jyoti Yojna and Integrated Power Development Scheme for strengthening of sub-transmission and distribution networks and for segregation of agricultural feeders to give adequate and reliable supply and reduce line losses.
- (v) Promotion of energy conservation, energy efficiency and other demand side management measures.
- (vi) Central Government has notified a new scheme namely Ujjawal Discom Assurance Yojana (UDAY) on 20.11.2015 for Operational & Financial Turnaround of Discoms.
- (vii) Expeditious resolution of issues relating to Environmental and forest clearances for facilitating early completion of generation and transmission projects.
- (viii) Providing support from Power System Development Fund for stranded gas based generation."

1.71 As per the 18th EPS, the All India Electrical Energy requirement by the end of the 12th Plan 2016-17) would be 1354874 MUs (for utilities). By end of the 12th Plan (Year 2016-17),

the per capita electricity consumption of the country is assessed to be around 1280 kWh. The per capita power consumption in the country for the year 2013-14 is 957 kWh [Per Capita Consumption = (Gross Generation+ Net Import)/ Mid Year Population]. The corresponding per capita power consumption in certain developed countries of the world vis-à-vis India for the year 2012 is given below:

Country	Per capita power consumption (kWh)
Australia	10218
China	3488
France	7367
Germany	7138
Japan	7753
Russia	6602
United Kingdom	5452
United States	12947
India *	914

1.72 It has been stated that by end of the 12<sup>th</sup> Plan, the per capita electricity consumption of the country is expected to be 1280 kWh.

1.73 Generation Target vis-à-vis Achievement and % Growth for 12th Plan years 2012-13, 2013-14, 2014-15 and 2015-16 is as under:

Year	Target (BU)	Achievement (BU)	Target %	Growth %
2012-2013	930.000	912.057	98.1	4.0
2013-2014	975.000	967.150	99.2	6.0
2014-2015	1023.000	1048.673	102.51	8.4
2015-2016*	1037.888	1011.995	97.41	-
			*LInto	Eab 2016

Upto Feb. 2016

1.74 The Plant Load Factor (PLF) of Thermal Power Stations is an index of utilization of the installed capacity. The average PLF of Thermal Power Station of Power Utilities during (April-November, 2014) was 65.1%. The sector-wise and overall PLF since 2007-08 was as under:

Year	Central (%)	State (%)	Private Utilities (%)	Overall (%)
2007-08	86.7	71.9	90.8	78.6
2008-09	84.3	71.2	91.0	77.2
2009-10	85.5	70.9	82.4	77.5
2010-11	85.1	66.7	76.7	75.1
2011-12	82.1	68.0	76.2	73.3
2012-13	79.2	65.6	64.1	69.9
2013-14	76.1	59.1	62.1	65.6
2014-15	73.3	59.7	63.4	65.1
2015-16	72.1	60.1	65.1	62.0

1.75 When the Committee desired to know the reasons for decline in the PLF of power stations, the Ministry have stated as under:

"Out of 175 Power Stations monitored by CEA, 78 Power Stations having the installed capacity of 98,640 MW are operating above the National PLF of 62.09% (Upto February 2016).

• Out of 175 Power Stations monitored by CEA, 7 Power Stations having the installed capacity of 10,240 MW are operating at a PLF of above 90%, 22 Power Stations having the installed capacity of 33,270 MW are operating at a PLF of above 80%, 55 Power Stations having the installed capacity of 73,815 MW are operating at a PLF of above 70% and 78 Power Stations having the installed capacity of 98,640 MW are operating at a PLF of above 60%.

• There has been huge capacity addition of around 20,000 MW per year during last 4 years, i.e. since 2011-12. Even the capacity addition during the 11th Plan was 54,964 MW. This has resulted in comfortable supply side. However, commemorate demand has not grown to this extent, thus resulting in mitigate shortages.

• The growth in Peak demand and Energy requirement has been only around 4.5% CAGR, respectively, during the first 3 years of the 12<sup>th</sup> Plan.

• There is only marginal growth in Energy and Peak Demand by 3.5% during the period April-February, 2016 over the corresponding period last year resulting in lesser generation growth.

• Over the years, there is a decline in the trend with respect to power shortages in the country. The Peak shortage has reduced from 16.6.% in

2007-08 to 3.2% during the current year. Energy deficit has reduced from 11.1% in 2008-09 to 2.2% during the current year.

• During the current year (April-February, 2016), Energy Deficit has reduced to 2.2% from 3.7% and Peak Deficit also reduced to 3.2% from 4.7%, respectively.

• Energy Conservation measures like use of LED lights, implementation of efficiency improvement scheme like PAT (Perform, Achieve, Trade) of BEE for Power Plants and BEE Star rating scheme for electrical appliances also reduced the demand.

• To take care of global warming, thrust is given to Non-Conventional (Renewable Energy) - Solar and Wind Power, hence reduction in conventional - thermal power demand resulting downward trend in Plant Load Factor.

• Shifting of Power generation from thermal to gas (by subsidy) due to low international price of oil & gas.

• High cost of electricity causing subdued demand and poor purchasing power of Discoms- resulting in low schedule and power cuts."

1.76 When the Committee raised the issue of the distressed financial position of the State

Electricity Boards/Utilities, the Secretary, Power, deposed before the Committee as under:

"One issue was very rightly pointed out saying that distribution companies, Discoms, are the most important link in the whole power sector and the health of the Discoms is very important. In short, I will just bring to the notice of the hon. Members that the new UDAY Scheme that we have launched is different from the FRP Scheme of 2012. Here, what has happened is that as was pointed out in the Rajasthan case, Rs. 80,000 crore was the outstanding loan. Now, what we are saying is that 75 per cent of this outstanding loan will be taken up by the State Government and against that bond will be issued. The average rate of interest that we looked at, it is about 12 1/2 per cent. Now, Rajasthan and UP have issued bonds. These are the States which have completed their takeover and issuing bonds. There is straightaway a saving of 4 per cent in the bond rate. Suppose, you take Rajasthan, on Rs. 40,000 crore, 4 per cent reduction on rate of interest is straightaway about Rs. 1,600 crore savings for one year. Secondly, we are signing an agreement and the Discoms are giving the AT&C loss trajectory. Hon. Chairman was saying that every agreement that you are entering into with the State Government gives a realistic projection. There is no financial package under this UDAY Scheme. It has been told to them that the agreement provides that if the Discoms continue to incur losses, their losses will be counted against the fiscal deficit of the State Government. It means that there is pressure on the State Government to make sure that the performance of the Discoms improves. Otherwise, half the time the losses used to be parked in the Discoms, though, ultimately, it used to be the liability of the State Government.

Thirdly, the banks have been told not to finance the losses. The old scheme provided for the financing of losses by banks, which really created problems. All the loans that were accumulated in the last 2-3 years were because the Discoms took loan and banks started financing losses. Hence, all the accumulation took place. So, here we have said that the banks will not finance any losses. They can only finance the CAPEX and working capital within a particular limit. So, there is pressure on the Discoms and the State Government to improve the performance. At the same time, the Government of India has committed to reduce the cost of generation. For example, we have now allowed swaping and rationalisation in the case of NTPC till December last, the cost of power has come down by Rs. 300-400 crore per month and all the benefit is going to the Discoms. So the Government of India is also doing its bit for helping the State Government and the Discoms to improve their performance.

I assure the Committee that the AT&C loss reduction is the most important thing. It is the crux of all the problems of Discoms. The lowering of the losses is the only thing that can help the Discoms and we are sure that we can do it with close hand-holding. People are talking about it, hon. Chairman is keen about it, the Committee itself has suggested certain measures and I am sure that in one or two years we will see the results."

# VII. PERFORMANCE OF POWER SECTOR PSUs

1.77 The Financial performance (IEBR only) of the Central Power Sector Undertakings

(CPSUs) during the 12<sup>th</sup> Five Year Plan is given at **Annexure-V.** 

1.78 A projection of Rs. 2,19,613 crore was made as Plan outlay for NTPC for the 12<sup>th</sup> Plan

period. However, the actual capital expenditure (cumulative for 4 years of the 12<sup>th</sup> Plan period)

is expected to be around Rs.89,000 crore. The Committee was apprised that it is expected that

at the end of the 12<sup>th</sup> Plan, Rs.1,20,700 crore will be utilized. When the Committee desired to

know the reason for the gap between the plan and the actual expenditure, it was stated by the

Ministry as under:

"The actual capital expenditure (cumulative for 4 years of the 12<sup>th</sup> Plan period) is expected to be around Rs. 89000 crore. The reasons for low level of expenditure vis-à-vis the 12<sup>th</sup> Plan projections are given below:

- I. Gas based projects could not be taken up due to lack of fuel Kawas-II, Gandhar-II and Rajiv Gandhi CCPP-I (Shortfall of Rs.9,316 crore).
- II. Investment approval delayed due to delay in award of bulk tendering projects Gadarwara, Lara, Darliplalli, Solapur and Tanda-II. Court case filed by M/s Ansaldo for rejection of technical bid. Award had to be retendered (Shortfall of Rs.31,303 crore).
- III. Projects considered in original plan but award delayed/not awarded yet Barethi, Pudimadaka, Katwa, Gajmara, etc. due to environmental, land, shortage of water issues, changes in site etc. (Shortfall of Rs.57,191 crore).
- IV. Projects scrapped Gidderbaha, Khasiabara, Badarpur expansion, Dhuvran, etc. (Shortfall of Rs.26,646 crore).
- V. Additional expenditure on new projects taken up (renewable, North Karanpura, Telangana, Rammam, etc.), spill over of XI Plan projects, etc. (Addition of Rs.24,805 crore).

As can be seen from the above, the projects could not be taken up / got delayed because of reasons beyond the control of NTPC."

1.79 During the sitting on the subject, when the Committee raised the issue of gap between

12<sup>th</sup> Plan outlay projections in regard to NTPC and the actual achievement, the Secretary,

Power, explained as under:

"Whenever a target is decided during the 12th Plan, it is a plan. The Twelfth Plan was decided much before the actual plan starts. So, the 12th Plan started in 2012 but the planning was done and the process started in 2008, 2009, 2010 saying that it should be implemented in 2012-17. That is a broad guidance figure. But when we actually started, two things happen. We do the Annual Budgeting. So, we put our target and we do the budgetary provision also. So, if you look at this figure IEBR expenditure figure that was indicated and look at the budgetary figure, there will be a difference. Though the plan anticipated that IEBR will be some Rs. 2 lakh something, if you look at the annual budget, figure will be difference. We have to assess our performance based on two things. On the aspirational number which has put in the Plan document which is much before the Plan started and the more realistic number which is put in the Budget and which we achieve or not."

1.80 When the Committee raised the issue of scrapping up of power projects by NTPC, the

representative of NTPC deposed before the Committee as under:

"If those (scrapped) projects would have come, the utilisation would have further reduced. As you know, PLF of most of the plants has come down. It is now touching 60 per cent. As the Secretary said, initially it was very ambitious. Afterwards, it was reviewed which projects should be taken up and adding capacity whether it is necessary to create the extra capacity which will be remaining un-utilized. So, from time to time there was a review as to how much capacity should be added to that."

1.81 He further explained:

"All of our plants which running below their capacity will prove burden on discoms and they are purchasing proportionately low power. It is possible that the UDAY Scheme may be the very beneficial for them, but until the demand increases whatever we will spend on the project, will be compitalization of expenditure so incurred and ultimately its load will be on discoms. The private sector is in fact facing a much bigger issue than what we are facing. Fortunately we are having a bigger power station which we are able to operate at more than 84 per cent PLF and the PLF in our coal-based power plants is 78 per cent whereas countryside it is coming to almost 62 per cent or 63 per cent. So, if more capacity is going to come and if the demand is not catching up, in that case we will have to make a balance. My point is that any capacity addition, this year against the total installed capacity of 2,70,000 MW, we added 24,000 MW. So, your percentage of capacity addition is higher than your electricity demand which is 5 per cent. Last to last year it grew by 11 per cent and last year it was 5 per cent."

1.82 The CPSU-wise capacity addition targets and achievements during the 12<sup>th</sup> Plan period

are as under:

SIN o	CPSU	12 <sup>th</sup> Plan Target	2012-13		2013-14		2014-15		2015-16 (till 29.2.2016)	
			Target	Ach	Target	Ach	Target	Ach	Target	Ach
1.	DVC	2200	500	500	600	0	600	600	600	600
2.	NEEPCO (T)	101	0	0	0	0	0	90.9	61.1	35.6
3.	NEEPCO (H)	770	-	-	-	-	-	-	110	
4.	NHPC	3502	645	374	708	708	130	130	80	40
5.	NLC	1250	0	0	500	0	1000	750	500	500
6.	NPC	5300	2000	0	2000	0	2000	1000	1000	-
7.	NTPC (T)	10600	3160	4160	1660	1660	855	855	945	750
8.	NTPC (H)	1320	-	-	-	-	-	400	400	400
9.	ONGC	726.6	363.3	363.3	363.3	0	363.3	363.3	-	-
10.	SJVNL	412	-	-	206	206	206	206	-	-
11.	THDC	-	-	-	-	-	-	-	-	-
	Total	26181.6	6668.3	5397.3	6037.3	2574	5154.3	4395.2	2696.1	2325.6

1.83 The Committee was apprised that against the generation capacity addition target of 11,920 MW set for NTPC, a capacity to the tune of 9,550 MW has already been added. It is also expected that NTPC will exceed its capacity addition target at the end of the 12<sup>th</sup> Plan.

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1.84 The Committee was informed that NTPC has 46,653 MW of generation capacity under

Fuel Mix	No. of Stations	Capacity (MW)	% Share	
	100% C	Dwned by NTCP	·	
Coal	18	35,085	75.2	
Gas/Liquid Fuel	7	4,017	8.6	
Hydro	1	800	1.7	
Solar	8	110	0.2	
Sub-total	34	40,012	85.7	
0	wned by Joint Ventu	ire and Subsidiaries of	f NTPC	
Coal	6	4,674	10.1	
Gas	1	1,967	4.2	
Sub-total	7	6,641	14.3	
Total	41	46,653	100	

operation. The break-up of this capacity is as under:

1.85 Average Coal Based Power Cost (Rs./kWh) of NTPC is as under:

	2010-11	2011-12	2012-13	2013-14	2014-15	Feb.2016
Fixed Charges	0.85	0.89	0.98	1.14	1.09	1.11
Variable Charges	1.61	1.89	1.73	1.99	2.02	1.69
Average Coal Tariff	2.46	2.78	2.71	3.13	3.11	2.80

1.86 The Committee was informed that NTPC has constantly endeavoring to reduce CO2 emissions. It was further stated that every 1% increase in efficiency yields 2.5% CO2 reduction. Following is the Gross Efficiency journey of NTPC:

Power Plant	Vindhyachal	Simhadri II	Sipat I	Barh II	Khargone	Advance
	II			onwards		USC Pilot
Year	1999	2011	2011	2013	2019	2022
Gross Efficiency HHV%	38.6	38.9	39.5	40.8	41.55	46

1.87 In the 12<sup>th</sup> Plan, Capacity addition target of 11,920 MW was set for NTPC by GoI. It has also been stated that the target of 11,920 MW will be fully met at the end of the 12<sup>th</sup> Plan. In

the first four years of the Plan, NTPC has achieved capacity addition of 9,550 MW as per the details given below.

Year	MoU Target (MW)	Achievement (MW)
2012-13	4,160	4,170
2013-14	1,875	1,835
2014-15	2,023	1,290
2015-16	2,145	2,255

# VIII. ENERGY CONVERVATION AND EFFICIENCY

1.88 The Energy Conservation Act, 2001 specifies energy consumption standards for equipment and appliances, establishes and prescribes energy consumption norms and standards for consumers, prescribes energy conservation building codes for efficient use of energy in commercial buildings, and establishes a compliance mechanism for energy consumption norms and standards. The Bureau of Energy Efficiency (BEE), a statutory body under the Ministry of Power, is responsible for spearheading the improvement of energy efficiency in the economy through various regulatory and promotional instruments.

1.89 There is a budgetary provision of Rs. 1,696 crore for Energy Conservation for the 12<sup>th</sup> Plan. However, achievement as on 31.01.2016 is Rs. 296.80 crore only. Information regarding Budget allocation vis-à-vis utilization of fund under Energy Conservation including NMEEE and Bureau of Energy Efficiency (BEE) during the 12<sup>th</sup> Plan is tabulated below:

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	12 <sup>th</sup> Plan Total	2012-13		2013-14		2014-15		2015-16		2016- 17
		BE	Actual	BE	Actual	BE	Actual	BE	Actual	BE
BEE and EC including NMEEE	2499.91	400	81.10	757.86	82.72	247.20	41.73	110.00	91.25*	164.00

\* As on 31.01.2016

1.90 When the Committee desired to know the reason for the poor financial performance

under the energy conservation and efficiency and BEE, the Ministry have stated as under:

"There are two schemes, which fall under the Energy Conservation segment. The scheme of Bureau of Energy Efficiency is for the purpose of promoting energy efficiency during the XII plan period and to achieve the target of reducing energy

consumption. BEE has initiated several programmes / schemes viz. Standards & Labeling of appliances, Commercial Buildings, Demand Side Management in Agriculture/Municipalities, SMEs and Large Industries and Capacity Building of SDAs. The other scheme is the scheme of Energy Conservation, where the funds to be utilized for carrying out National Energy Conservation Awards and National level Painting Competition for school children. In addition, under the National Action Plan on Climate Change (NAPCC), one of the Missions is the National Mission for Enhanced Energy Efficiency (NMEEE). Perform; Achieve and Trade (PAT) mechanism, Market Transformation for Energy Efficiency (MTEE), Energy Efficiency Financing Platform (EEFP) and Framework for Energy Efficient Economic Development (FEEED) are various components of the Mission.

The EFC / SFC approval of the schemes got delayed as the erstwhile Planning Commission at the advanced stage of the EFC/SFC finalization, advised MoP that all the schemes under Energy Conservation head and BEE head to be clubbed into bigger scheme(s). This necessitated multiple EFC/SFC proposals to be realigned/clubbed into five SFC/EFCs. These were approved by 2014 only, resulting in lesser utilization.

The revised budget outlay approved for the 12<sup>th</sup> Plan was Rs 1327.97 crore which includes Rs. 315 Crore for Partial Risk Guarantee Fund for Energy Efficiency (PRGFEE), and Rs. 75 Crore for Venture Capital Fund for Energy Efficiency (VCFEE). For the financial year 2016-17, approved budget provision under the head of Bureau of Energy Efficiency and Energy Conservation is Rs. 164 crore."

1.91 On being asked by the Committee about achievement under the schemes, the Ministry

have stated as under:

"Bureau of Energy Efficiency (BEE) has initiated a number of energy efficiency initiatives in the areas of household lighting, commercial buildings, standards and labeling of appliances, demand side management in agriculture/municipalities. These initiatives have resulted in an avoided capacity generation of 10836 MW during the XI Plan period as against the target of 10,000 MW.

Further, during the XII plan, BEE has been assigned a target of avoided capacity generation of 12,350MW / 60.16 BU, against which the achievement has already been approximately 16968 MW/ 37.97 BU during 4 years of 12<sup>th</sup> Plan.

Under the National Mission for Enhanced Energy Efficiency, there was energy savings target of 6.686 million tonnes of oil equivalent (mtoe); however, at the end of PAT cycle – I, i.e. by 2014-15, there was total savings of 8.64 mtoe, which is 129% of the actual target."

1.92 When the Committee asked for the targets and action plan for various schemes, the

Ministry have provided the following information:

All values are in Billion Units

S.	Sahamas	12 <sup>th</sup>		Ac	tuals		Target	
No		Plan	201	201	2014-	2015-	2016-	Remarks
		Target	2-13	3-14	15	16	17	
1	Standards, Codes & Labelling for Appliances, Buildings & Energy Efficiency Research Contro	20.76	2.41	2.86	3.4	Will be updat ed after 30/4/ 16	9	Savings will increase due to 3 additional appliances under mandatory regime, ratcheting up of standards and data reporting of ECBC
2	Demand Side Management	4.06	0	0	0	0	4.06	Savings from Demonstration projects will be reported by the end of 2016-17
3	Energy Conservation/ Awareness & Strengthenin g of SDA	4.58	4.64	4.84	5.77	2.39	2.5	Savings reported by industrial units covered under PAT scheme is included under NMEEE for 2015-16 onwards
4	NMEEE	30.76	0.63	0.02 8	0	11	8.5	Savings due to PAT scheme will accrue these savings for 2016-17
Total		60.16	7.68	7.73	9.17	13.39	24.06	The target of 60.16 Billion Units is likely to be achieved by end of 12th plan (2016-17)

1.93 The Ministry also provided the State-wise details as under:

"The Bureau initiated the Standards & Labeling programme for equipment and appliances in 2006 to provide the consumer an informed choice about the energy saving and thereby the cost saving potential of the relevant marketed product. The scheme is invoked for 21 equipment/appliances, i.e. Room Air Conditioners, Cassette Type air conditioners, Tubular Fluorescent Tube Lights, Frost Free Refrigerators, Distribution Transformers, Induction Motors, Direct Cool Refrigerator, electric storage type geyser, Ceiling fans, Color TVs, Agricultural pump sets, LPG stoves, Washing machine, Laptops, ballast, floor standing ACs, office automation products, Diesel Generating sets & Diesel pump-sets under these of which the first 5 products have been notified under mandatory labeling and remaining appliances are presently under voluntary labeling phase. Another 3 appliances are in the advance stages of being included under the mandatory regime. Also, BEE has recently brought out labelling scheme for LED bulbs. Also, the Corporate Average Fuel Consumption Standards (CAFC) for passenger cars has been notified in May, 2015. BEE is also pursuing for star labeling of passenger cars.

The Energy Conservation Building Code (ECBC) of the Bureau 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 2001, the State Governments have the flexibility to modify the code to suit local or regional needs and notify them. Presently, 8 States namely, Rajasthan, Odisha, Union Territory (UT) of Puducherry, Uttarakhand, Punjab, Karnataka, Andhra Pradesh and Telangana have notified ECBC for their States. 15 others States are at advanced stages of adopting the ECBC. The code is in voluntary phase of implementation.

Complementing the efforts of the Government, ECBC has been integrated in other rating & compliance systems being followed in the country such as EIA (Environmental Impact Assessment) for large area development under MoEF (Ministry of Environment & Forest), Green Rating for Integrated Habitat Assessment (GRIHA) rating system of ADARSH and Leadership in Energy & Environmental Design (LEED) rating system of the Indian Green Building Council (IGBC). The Design Guidelines for 'Energy-Efficient Multi-Storey Residential Buildings' have been developed with the objective to provide a comprehensive information on how to design energy-efficient multi-storey residential buildings. These guidelines will be used by the agencies/persons involved in the regulation, design, and construction of multi-storey residential buildings in urban areas such as private and government sector developers and builders, architects and other design professionals, and urban local bodies.

Under the Perform, Achieve and Trade (PAT) schemes, energy saving targets for energy intensive industries belonging to 8 sectors were notified in 2012. In the first cycle of PAT (ending in year 2014-15), 478 industrial units in 8 sectors (Aluminum, Cement, Chlor- Alkali, Fertilizer, Iron & Steel, Paper & Pulp, Thermal Power, Textile) were mandated to reduce their specific energy consumption (SEC), i.e. energy used per unit of production. Overall, the SEC reduction targets envisaged to secure 4.05% reduction in energy consumption in these industries totaling an energy saving of 6.686 million tonne of oil equivalent (mtoe). However, the reported savings at the end of PAT cycle – I is 8.64 mtoe. During the PAT cycle -2 which has begun from 1st April, 2016 621 industrial units has been covered from 11 sectors (with inclusion of DISCOMs, Railways and Refineries). Savings of 8.869 mtoe is envisaged at the end of PAT cycle – 2 i.e by March, 2019.

The National Energy Conservation Day is being celebrated on 14<sup>th</sup> December every year. On this day, innovation and achievements in energy conservation of agencies; the industries, buildings, zonal railways, state designated manufacturers of BEE star labeled appliances, electricity distribution companies, municipalities are being recognized. The responses among the industrial and commercial units have become very encouraging as is evident from the increasing participation level. The National Painting Competition on Energy Conservation 2014 was a resounding success. The huge success of Painting Competition of BEE can be attributed to the fact that the children participating during 2015 were 1.052 crores. This participation was about 66% higher than that in the previous year, which is being organized all over the country in association with Bureau of Energy Efficiency and 11 CPSUs under Ministry of Power."

1.94 The Lighting sector accounts for about 20% of the total electricity consumption in India.

On 5<sup>th</sup> January, 2015, the Government has launched LED based efficiency for households &

street lights. The details of the targets and achievements along with the timeline are as given

below:

	Time frame		Targ	Present Status			
		LED	streetlight	Electrical Savings	(as on 31.03.2016)		
		installation	_	-			
	2016	90 lakhs		2.4 billion kWh	7.5 lakhs streetlights		
	2020 3 crore			5 billion kWh	installed in 6 States		
Domestic Efficiency Lighting Programme (DELP)							
	Time frame	Tarç		ets	Present Status		
		LED bulb dis	stribution	Electrical Savings	(as on 31.03.2016)		
	2016	9 crore		11 billion kWh	9.15 crores bulbs		
	2020	77 crore		25 billion kWh	distributed in 26 States		

## LED Street Lighting Project

1.95 When the issue of unsatisfactory achievement under Street Lights was raised, the representative of EESL, deposed before the Committee as under:

"As far as street light is concerned, definitely we couldn't achieve much. In fact, there the success rate was very low. Three-four reasons are attributed to this. One of the biggest reasons is that only three states signed up with us during the last year. Andhra Pradesh, Rajasthan and other two-three states signed up partially due to which we couldn't get more nos. Secondly, it was the brand new technology and possibly our assessment in respect of street lights was a bit more as the capacity of Industry for street lights was not that much whereas if you see the capacity of bulbs, it was 09 crores and we could achieve that. In fact the private sector itself has achieved six crores besides the said 09 crores. In total 15 crore bulbs have gone into the market in the last year. To correct that Secretary Sir has issued an order that6 in all the smart cities wherein Government of India is giving approval, only LED street lighting will be done. Secondly, we are going to have an agreement with two-three big States. In Maharashtra, we are signing an agreement with around 12 corporations. With 02 it has been already done and with the remaining 10 it is about to be done. Chhatisgarh,, Madhya Pradesh, Odisha - all these States are associating with us. Moreover, I would like to tell you that Municipalities themselves have replaced around 10 to 12 lakh street lights.

1.96 When the Committee desired to know the progress made in regard to installation of

smart meters, the representative of the Ministry deposed as under:

"There are two-three issues related to the smart meters. It has been fixed under 'UDAY' Scheme that smart meters be installed for the consumers usng electricity more than 500 units per month by December, 2017 and the same be installed for the consumers usng more electricity than 200 units per month by December, 2019. BIS standard has been determined. Basically, smart meter is taken as advance infrastructure in which provision of communication is also made alongwith the smart meter and the required standard for communication has been prepared Presently, it has not been published by BIS.

The second issue relates as to how it will be communicated from there. As you have said that the consumer on his part may also engage in it and can calculate according to time of day metering. As present, the cost of three phase meter is more than Rs. 8000 and the cost of single phase meter is approximately Rs. 5000. The present cost of a normal meter is Rs. 900 or Rs.1200. This means that the cost of a smart meter is six to eight times more than that of a normal meter. Initiatives are being taken to reduce its price.

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### Part – II

#### **Observations/ Recommendations of the Committee**

#### Annual Plan Outlay

2.1 The Committee, while scrutinizing the Gross Budgetary Support (GBS) of the Ministry of Power for the year 2015-16, note that against the sought outlay of Rs. 31,519.84 crore (GBS component), the Ministry of Finance has approved the allocation of Rs. 12,200 crore only. The Ministry had last year also sought outlay of Rs. 19,243.46 crore as GBS component; however, the Ministry of Finance had approved Rs. 6,799.43 crore only. Against this, the actual expenditure as on 29.02.2016 is Rs. 6,585.71 crore. It appears that the Ministry want to accelerate the pace of execution of its various programmes, and rightly so, to make up for the losses due to the slow pace in the first three years of the 12<sup>th</sup> Plan due to their non-finalization. The Committee are of the considered view that electricity is the one of the most crucial components for the economic as well as social development of the country, and as much, it should get the due attention. Also, in the backdrop of the target to provide electricity access to all in the country by 2018, it is important that this sector should be provided adequate funds. The Committee, therefore, express their grave concern over the reduced budgetary allocation by the Ministry of Finance for this sector. The Committee note that the allocation of Rs. 12,200 crore for the year 2016-17 is the highest yearly allocation

so far, almost double than that of the previous year. The Committee, therefore, strongly recommend:

(i) The Ministry of Power may keep accelerating the momentum of execution of their programmes, even in the face of the budgetary cut, and try to fully utilize the allocated fund.

(ii) The Committee also recommend that the Ministry of Finance may provide more allocation to the Ministry of Power at the RE stage if the Ministry of Power so require.

(Recommendation Sl. No.1, Para No.1)

2.2 The Committee note that the important, new initiatives of the Government, *viz.* Smart Grid and Green Energy Corridor, have not shown much progress so far. The Smart Grid scheme envisages setting up of an institutional mechanism by launching the "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 the point of generation to the point of consumption and ensure control of power flow or curtailment of loads matching generation on real time basis. The Committee further note that the Green Energy Corridor is the scheme for maximization of renewable energy generation and integration with the main grid, without compromising on the security and stability of the power system. The scheme also envisages the setting up of a Renewable Energy Management Centre (REMC). Since a massive 1.75 GW capacity of renewable energy will be added in the coming years, these programmes are extremely important. However, the Committee find that in respect of the Green Energy Corridor, only token money has been allocated since 2014-15. In the case of Smart Grid, against the provision of Rs. 40 crore for the year 2015-16, no utilization so far has been reported. Again, for the year 2016-17, a provision of Rs. 30 crore has been made. The Committee, therefore, strongly recommend that:

(i) These schemes be fast tracked and sufficient allocation be made to them from the next financial year.

(ii) The progress of these schemes be monitored on a regular basis as this will serve the need of Grid management.

(iii) The Renewable Energy Management Centre be set up without any delay to coordinate the implementation of the National Smart Grid Mission.

(Recommendation SI. No.2, Para No.2)

### 12th Five Year Plan

2.3 The Committee note that there is an assessed provision of Rs. 54,279 crore of Gross Budgetary Support (GBS) for the 12<sup>th</sup> Plan. Against this, till 29.02.2016, only Rs. 19,242 crore has been utilized. There is a provision of Rs. 12,200 crore for 2016-17 which happens to be the terminal year of the 12<sup>th</sup> Plan. Assuming that the provision of Rs. 12,200 crore is fully utilized, even then there will be a shortfall of a Rs. 22,837 crore. The Committee further note that for the first three years of the 12<sup>th</sup> Plan, i.e. 2012-13, 2013-14 and 2014-15, the Ministry were allocated GBS of Rs. 9,642 crore for each; year, however, their actual expenditure has been Rs. 2,537 crore, Rs. 4,530 crore and Rs. 5,590, crore respectively. Against the allocation of Rs. 6,800 crore for the year 2015-16, the Ministry, as on 29.02.2016, have utilized Rs. 6,585.71 crore. In regard to the reason for less expenditure against the allocated GBS, the Ministry have stated that many of their major schemes could take off from the year 2014-15 only as the due diligence process of appraisal and approval could get completed only in the latter half of the financial year 2013-14 and during 2014-15. They have further stated that it is expected that the trend of better performance over the previous two years would further improve during 2016-17. The Committee feel that though the performance of the Ministry in regard to utilization of funds during the year 2015-16 has been satisfactory, nonetheless, there is much scope of improvement. Since the achievement of the Ministry so far is very far from the target set for the 12<sup>th</sup> Plan, there is need to achieve maximize possible utilization of fund in the current financial year, i.e. 2016-17. Optimum utilization of fund is also important due to the fact that the Ministry of Finance, while approving the allocation, apart from the demand and the requirement of fund for schemes, also consider their previous performances. The Committee, therefore, recommend that:

(i) The Ministry must try for full utilization of the allocated fund. Also, put up additional demand at the time of Revised Estimate if the situation requires so.

(ii) The physical target may appropriately be revised corresponding to the financial allocations.

(Recommendation SI. No.3, Para No.3)

The Committee note that a target of 88,537 MW of generation capacity 2.4 addition has been fixed for the 12<sup>th</sup> Plan period. The Ministry have informed that against this, a capacity of 75,195.7 MW has been achieved as on 29.02.2016, which is 85% of the total target. They have also stated that since one year is still left in the 12<sup>th</sup> Plan, it is expected that the targets will be fully achieved. The Committee further note that the Central Sector have been assigned the target of 26,182 MW, wherein their achievement is 14,692.1 MW which stands for a meager 56% of the target. The plea of the Ministry that though the Central Sector may be falling short of the targets, but the overall target of 88,000 MW for the 12<sup>th</sup> Plan is going to be achieved, is not acceptable. The overall target is being achieved due to over-achievement of targets by the Private Sector. The Committee are pleased to note the outstanding performances by the State and the Private Sector in generation capacity addition so far in the 12<sup>th</sup> Plan. In the 11<sup>th</sup> Plan also, the performance of the Private Sector was exceptionally good, and they had achieved 23,012 MW against the target of 15,043 MW, whereas the Central Sector could manage to achieve only 15,220 MW against the target of 36,874 MW in the 11<sup>th</sup> Plan. The Committee, therefore, are surprised at fixing a small target of 26,182

MW for the Central Sector for the 12<sup>th</sup> Plan as this also includes 21,654 MW slipped projects of the 11<sup>th</sup> Plan. Despite this, they have so far achieved only half of what has been assigned to them in the 12<sup>th</sup> Plan. Moreover, their financial performance in regard to IEBR have also been poor so far in this Plan period, thus, there is a possibility that it will adversely impact in the form of lesser capacity addition which will be felt in the 13<sup>th</sup> Plan too. The Committee, therefore, are not satisfied with the performance of the Central Sector as far as generation capacity addition is concerned. The Committee, therefore, recommend that:

(i) The Ministry must make all out efforts to improve the capacity performances of the Power Sector Public Undertakings.

(ii) Secondly, the Committee recommend that the generation capacity addition not be left entirely to the Private Sector, but the Government may endeavor to match the performance of the Central PSUs with that of the Private Sector as far as generation capacity addition is concerned.

(iii) The target of the Central Sector for the next Plan period may be appropriately enhanced, keeping in view the capacity, technical expertise and resources.

(Recommendation SI. No.4, Para No.4)

2.5 The Committee note that in general, the performance of the Central Sector in generation capacity addition since the 11<sup>th</sup> Plan has not been satisfactory, and though, their performance in hydro power, in particular, has been very poor. Surprisingly, the performance of the Private Sector in this field is also not

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satisfactory. Since the demand of electricity in the country has been growing consistently, it becomes imperative to keep adding generation capacities. Thermal power is the mainstay of installed generation capacity in the country. Moreover, thermal power is still a major contributor in capacity addition; thus, the share of hydro power in the total energy mix has constantly been falling. The Committee, therefore, desire that:

(i) The Government must make sincere efforts to promote hydro power development and take required steps to increase its share in the energy mix.

(ii) The thrust on capacity addition of hydro power should be direct and time bound.

(iii) Routine excuse of delay in implementation of hydro power projects may not be repeated because the problems are not insurmountable and tangible solutions should be found.

(Recommendation Sl. No.5, Para No.5)

# Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY)

2.6 The Committee note that the Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) will cover works relating to feeder separation, strengthening of subtransmission & distribution systems, including metering of distribution transformers/feeders/consumers and rural electrification. The erstwhile Rajiv

Gandhi Grammen Vidyutikaran Yojana (RGGVY) which was launched by the Government of India in 2005 for providing access to electricity to all households has also been subsumed under DDUGJY as rural electrification component. When the Committee asked the Ministry as to how many villages/BPL families are still left to be electrified/provided electricity connections under the scheme, it has been informed that, as on 31.03.2016, there are 11,344 un-electrified villages that are yet to be electrified, of which 434 villages have been reported uninhabited. Also 397.44 Lakh BPL households were proposed to be provided free electricity connections under the rural electrification component of the scheme (erstwhile RGGVY), and as on 29.02.2016, connections to 232.00 Lakh BPL households have been released by the States. It has also been stated that the target of electrifying un-electrified villages will be achieved within the stipulated time line, i.e. by May 2018. The target for providing connections to BPL households is likely to be achieved by 2019. When the Committee raised the issue that the actual number of villages that are to be electrified is much more than the official figure, it has been stated that the figures regarding electrification of villages are provided by the States and are verified through the 'Gram Vidyut Abhiyanta' (GVA) deployed in the States under the scheme. Also, the details regarding electrification of villages and verification by GVAs are updated regularly through the Mobile App - 'GARV'. However, the Committee are of the view that the number of villages that are yet to be electrified are much more than the official figure. The Committee are also aware that there are cases where electrification of the villages has been done only

in records but in reality they are still deprived of the same. Moreover, there have been numerous complaints in regard to the poor quality of electrification work carried out in the villages which have already been covered under the scheme. The Committee, therefore, recommend that:

(i) The Government must not limit the work of electrification to the list provided by the State Government only. Rather, they shall be open to include any left out village if the same is brought to their notice by the local representatives or others.

(ii) It is also recommended that the Government pay utmost attention towards the quality of work being undertaken in the scheme through more frequent and stringent monitoring.

(iii) The Member of Parliament concerned may be taken into confidence while submitting the list of these villages block-wise so as to ensure the veracity of figures in this regard.

(iv) The definition of the electrification of a village may be revisited and concepts like intensive electrification of partial electrified villages be done away with.

(v) The BPL household connection should also be monitored in an intensified manner.

(Recommendation SI. No.6, Para No.6)

The Committee note that metering feeders, transformer and consumers in 2.7 village area is one of the objectives of DDUGJY. The Committee also note that in October, 2014, there have been 15.5% of unmetered or defective 11KV feeders in the rural areas and 66% unmetered or defective distribution transformers in rural and urban areas. Also, 71% of the agricultural connections in rural areas are unmetered or defective. The Committee further note that under the scheme, Utilities shall create dedicated teams for implementation of projects at district and Utility/State level, including necessary manpower and requisite infrastructure to ensure smooth implementation and monitoring. An officer of the rank of Chief Engineer/General Manager or above, will be designated as the Nodal Officer from the dedicated team at utility/ State level. The Nodal Officer shall be responsible for implementation of the scheme in accordance with the prescribed guidelines, providing all necessary information, including physical & financial progress related to the projects, and arrange to get relevant orders/clearances from the State Government. The nodal agency, the Rural Electrification Corporation Limited (REC) will monitor implementation of scheme through its project offices at the field level. The Committee are of the firm view that there is urgent need of proper metering of all electricity connections, irrespective of their usage. The Committee, therefore, recommend that:

(i) The issue of unmetered electricity, defective feeders in rural areas, unmetered and defective distribution transformers and unmetered and defective agricultural connections in rural areas need to be rectified on a priority basis.

(ii) Simultaneously, the implementation of this project may be expedited and completed within the stipulated timeline.

(iii) The role of REC should be defined and sufficient infrastructural support be provided to ensure that the deficiencies are attended to in a time bound manner.

(Recommendation Sl. No.7, Para No.7)

2.8 The Committee note that the DDUGJY has been introduced with a view to strengthen the sub-transmission and distribution system including metering of distribution transformers/ feeders. This will help to address the critical gaps in rural areas. Under the scheme, all Discoms including private sector Discoms, and State Power Departments are eligible for financial assistance. In rural areas where the private sector Discoms have been engaged in the work of power supply, the projects under them will be implemented through a State Government agency and the assets so created will be owned by the State Government/ State owned companies. These assets will be handed over to the Discom concerned for their use through the licensing period on mutually agreed terms and conditions. The responsibility of operation and maintenance of these assets will be of Discoms concerned. The Committee feel that this will lead to the overlapping of the system and shirking of responsibilities in critical areas. There should be uniformity and integrity of approach so far as strengthening of the rural infrastructural work is concerned. This will ensure proper execution of work in a responsible manner by the involved agency. The terms and conditions for use of assets so created are a

gray area. The objective of the scheme is to improve upon the existing system by filling the gaps; this can be handled by even the private Discoms in their respective areas of jurisdiction. The Committee, therefore, recommend that:

(i) There may be clarity with regard to the methodology of implementing the DDUGJY.

(ii) Private Discoms should be entrusted with the responsibility of upgrading the system in their areas as envisaged under the scheme.

(iii) The asset created through the rejuvenation of the system may accordingly be shared with the State Government or State owned agency.

(Recommendation SI. No.8, Para No.8)

2.9 The Committee note that one of the features of the DDUGJY is the provision of complete flexibility which has been provided to the States to prioritise the scope of work as per their requirement. Although, the objective of this feature is to give due autonomy to the States to prioritise their work based on the requirement, yet the functioning of the scheme at the ground level leaves much to be desired. The Committee have come across several instances wherein it can be inferred that their priorities have not been fixed objectively. In such a situation, the role of the Union Government becomes important since, primarily, it is a central scheme. The Committee, therefore, recommend that:

(i) A method may be devised ensuring the fair objective and effective implementation of the scheme.

(ii) The provision for project management agency may appropriately be amended in project formulation bid processing and monitoring to include modification by the Union Government in DPRs submitted by the State Governments, if felt necessary.

(Recommendation SI. No.9, Para No.9)

#### Integrated Power Development Scheme (IPDS)

2.10 The Committee note that the Integrated Power Development Scheme (IPDS) is a new scheme formulated on 20th November, 2014 with an objective to provide 24x7 power supplied for consumers, to provide access to all urban households and facilitate State Power Utilities to reduce the level of AT&C losses to 15%. 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. The erstwhile scheme of R-APDRP has got subsumed into IPDS along with its outlay. The Committee find that the scheme is not being implemented at the desired pace. During the year 2013-14, against the allocation of Rs. 1261.04 crore, only Rs. 595.25 crore could be utilized under R-APDRP. In the same year, Rs. 50 crore was spend under IPDS against the allocation of Rs. 100 crore. In the year 2015-16,

when funds were allocated jointly under IPDS, it has been reported that Rs. 569.54 crore has been spent (as on 31.01.2016) against the allocation of Rs. 600 crore. The reason for such slow pace has been stated to be the inadequate budgetary allocation for the scheme. However, the Ministry have informed that after much persuasion they have managed to get Rs. 5,500 crore for IPDS for the year 2016-17. The Committee are surprised to know that such an important programme is not being implement at the desired pace for want of adequate allocation. This scheme aims to strengthen and improve the distribution sector, which is the Achilles' heel of the power sector. It also envisaged to bring down AT&C losses, which is the root cause of the malady affecting the distribution sector. The Committee, therefore, recommend that:

(i) Adequate funds must be allocated to IPDS so that its implementation is not delayed due to lack of funds.

(ii) The programme may be given a definite timeline for completion, and its expeditious implementation should be ensured.

(Recommendation Sl. No.10, Para No.10)

#### **Performance of Power Sector PSUs**

2.11 The Committee note that a projection of Rs. 2,19,613 crore was made as Plan outlay for NTPC for the 12<sup>th</sup> Plan period. However, the actual capital expenditure (cumulative for 4 years of the 12th Plan period) is expected to be around Rs.89,000 crore. The Committee was apprised that it is expected that at the end of the 12<sup>th</sup> Plan, Rs. 1,20,700 crore will be utilized as one more year is still to go in the 12<sup>th</sup> Plan. The Committee find that even if the expected expenditure of Rs. 1,20,700 crore at the end of the 12<sup>th</sup> Plan is achieved, there will be a huge shortfall of Rs. 98,913 crore which stands for 45% of the target. The Ministry, besides other reasons, have attributed scrapping of projects worth Rs. 26,646 crore by NTPC for their less than planned expenditure during the 12<sup>th</sup> Plan period. The Committee further note that NTPC has been assigned a target of 11,920 MW of generation capacity addition during the 12<sup>th</sup> Plan. Against this, it has been stated that capacity to the tune of 9,550 MW has already been achieved and it is expected that the target will be surpassed at the end of the 12<sup>th</sup> Plan. The Committee, noting that financial expenditure and physical performance have a direct correlation, asked the Ministry to explain as to how capacity addition targets have been fully achieved despite incurring only half the expenditure. The Ministry have indicated that un-utilized expenditure is related to the projects meant for the 13<sup>th</sup> Plan period. In this context, the Committee express their unhappiness with the financial performance of NTPC during the 12<sup>th</sup> Plan. The excuse that the planning in regard to expected expenditure by NTPC was done

much before the start of the 12<sup>th</sup> Plan, is not acceptable. A deviation of 15-20% in any plan is justified, but shortfall of almost half of the target compels the Committee to infer that either the planning was flawed or there were lapses in its execution. The Committee also feel that the poor expenditure by NTPC may result in lesser capacity addition target for NTPC in the 13<sup>th</sup> Plan too.

(i) The Committee, therefore, recommend that the Government should make strenuous efforts to improve the performance of NTPC.

(ii) Simultaneously, the Committee desire that pre-emptive steps be taken so that the lesser expenditure during the 12<sup>th</sup> Plan should not result in truncated target for NTPC for capacity addition during the 13<sup>th</sup> Plan.

(Recommendation Sl. No.11, Para No.11)

2.12 The Committee observe that the NTPC has scrapped projects worth Rs.26,646 crore during the ongoing 12<sup>th</sup> Plan. When the Committee expressed their concern over scrapping of these projects, it has been justified by saying that if those scrapped projects would have come through, the utilization of the power stations would have further reduced. The Committee express their concern over the matter as scrapping of power projects not only reduces the quantum of capacity addition but also involves avoidable expenditure. The justification that the scrapping of the project was done to adjust the demand fluctuation seems

flawed as there was also an option of postponing these projects. Moreover, the Private Sector has started adding massive capacities and they have not only achieved their target but even surpassed it by huge margins in the 11<sup>th</sup> Plan as well as in the 12<sup>th</sup> Plan. The Committee agree that there may be short term fluctuations in demand but when we compare per capita consumption with other developed nations, it becomes clear that we still have a long way to go as far as power generation capacity is concerned. And if we have to increase our generation capacity, NTPC seems to be the preferred choice for various reasons. First, they are the leading player in the field, having the required expertise, manpower, resources and fund raising ability. Secondly, they are able to produce electricity at low tariff. Moreover, due to technical advancements they have achieved higher efficiency and very low emission in their power stations. The Committee, therefore, recommend that:

(i) The scrapping of power projects may be reviewed, especially when substantial expenditure has already been incurred on them.

(ii) Further, NTPC should not lose their share of capacity addition to the Private Sector in power generation due to short term demand fluctuations; rather, they should endeavor to compete well with the Private Sector which, despite all odds, have performed outstandingly.

(iii) Reasons for scrapping of the power projects should be submitted at the time of ATR.

(Recommendation Sl. No.12, Para No.12)

## **Development of Power Sector**

2.13 The Committee note that during the recent years there has been a trend of decline in overall energy deficit as well as in peak demand shortage. Energy deficit which was 8.5% in 2010-11 has now reduced to 2.2%. Similarly, the peak energy deficit has reduced to 3.2% from 9.8% in the year 2010-11. This trend could largely be attributed to the massive generation capacity addition during the meantime. The Private Sector has contributed significantly in this huge capacity addition. The statistics related to energy demand may not necessarily be completely correct as they do not capture the latent demand of electricity but are based on the demand placed for electricity and its fulfillment. However, the Committee are distressed to know the other reason of the falling energy deficit, which is the low demand. It has been reported that there are many power stations that are running way below their optimum PLF due to the low demand. The low demand from the industry sector may be part of a passing phase and there is every possibility of a bounce-back in the coming times; however, the low demand from State Utilities owing to their inability to purchase electricity at the price being offered by the generation companies, is a cause of concern. It is a well known fact that the financial condition of several Discoms is in bad shape. They are reeling under heavy financial liabilities. In this scenario, they are reluctant to purchase electricity at a high price other than what is absolutely required. This is leading to a very anomalous situation, wherein despite the availability of adequate

electricity generation capacity, many parts of the country are deprived of electricity or are not getting it as per their requirement. The Committee, therefore, recommend that:

(i) Appropriate steps should be taken on priority basis to improve the financial condition of the State Discoms. The new scheme, viz. Ujjawal Discom Assurance Scheme (UDAY) which has been launched with the objective of financial turnaround of the Discoms may be implemented expeditiously.

(ii) The Government should also explore avenues to bring electricity generation cost to the lowest possible level.

(Recommendation Sl. No.13, Para No.13)

## **Energy conservation and efficiency**

14. The Committee note that against the budgetary provision of Rs. 1,696 crore for the 12<sup>th</sup> Plan for Energy Conservation, a meager Rs. 296.80 crore could be utilized till 31.01.2016. Similarly, under the BEE head, only Rs. 156.25 crore could be utilized against the allocation of Rs. 803.91 crore. Further, for the year 2016-17, which is the last year of the 12<sup>th</sup> Plan, BEE and Energy Conservation have been allocated only Rs. 64 crore and Rs. 100 crore, respectively. These programmes have gained more importance in the present scenario, considering the gap between energy demand and supply. The Committee, therefore, recommend that

sincere efforts should be made to expand these schemes and more funds be allocated at the RE stage.

## (Recommendation Sl. No.14, Para No.14)

2.15 The Committee observe that a target of installation of 90 lakh LED streetlights by the year 2016 has been set. It has also been planned to install 3 crore LED streetlights by the year 2020. However, against this target, only 7.5 lakh streetlights have been installed in 6 States till 31<sup>st</sup> March, 2016. When the Committee desired to know the reason for such poor performance, it has been stated that the LED streetlight scheme has not made the desired progress due to the fact that only a few States have signed up for the scheme last year. Secondly, since this is quiet a new technology, the targets proved more enthusiastic considering the present capacity of the industry for LED streetlights. It has been further stated that with a view to providing a thrust to this scheme, an order has been issued that all the Smart Cities, which are being approved, will have only LED street lightings. The Committee, while expressing its disappointment with the poor achievement of the set targets under the LED streetlight schemes, appreciate the decision of the Government to have only LED streetlights in all the upcoming Smart Cities. The Committee are also glad to note the good performance in respect of Domestic Efficiency Lighting Programme (DELP), wherein, 9.15 crores bulbs

have been distributed in 26 States (as on 31.03.2016) against the target of 9 crore for the year 2016. Further, the efforts made in bringing down the cost of LED bulbs in the country, are also commendable. The Committee, therefore, recommend that:

(i) The Government must take more such steps/make provisions to provide a further push to the LED streetlight scheme.

(ii) Utmost efforts should be made to expedite this scheme.

(iii) The Government must endeavor to augment the manufacturing capacity of LED streetlights.

(iv) The Committee, with a view to ensuring quality control of LED bulbs, desire that prompt action may be taken to make available adequate number of testing facilities for LED bulbs in the country.

2.16 The Committee understand that there is a provision for installation of Smart Meters by December, 2017, under the UDAY scheme, for consumers who use more than 500 units of electricity in one month. There is also a proposal to extend this to the consumers whose consumption exceeds 200 units per month, by December, 2019. The Committee has been apprised that at present the normal cost of a Smart Meter is in the range of Rs. 5,800-8,000 against the cost of Rs. 900-1200 for normal meters. The Committee are in complete agreement with this proposal as the Smart Meters will not only be helpful for Discoms but also facilitate the end consumers. The Committee, therefore, recommend that: (i) Sincere efforts be made to implement the provision of installing Smart Meters within the stipulated timeline.

(ii) Pre-emptive measures be taken to ensure the availability of adequate number of Smart Meters required for the scheme.

(iii) Efforts be made to bring down the cost of Smart Meters, as done in the case of LED bulbs, so that its high cost should not become a deterrent for its popularity.

New Delhi; 29<sup>th</sup> April, 2016 Vaisakha 9, 1938 (Saka) DR. KIRIT SOMAIYA Chairman, Standing Committee on Energy