



Government of India

OUTCOME BUDGET

of



Ministry of Power
2016 - 17



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2016-17

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OUTCOME BUDGET

EXECUTIVE SUMMARY

The Plan Outlay of the Ministry of Power for the year 2016-17 is Rs.79,883.57 crore which includes Internal Extra Budgetary Resources (IEBR) of CPSUs amounting to Rs.67,683.57 crore and Gross Budgetary Support (GBS) of Rs.12,200.00 crore. The Non Plan outlay of the Ministry of Power for the year 2016-17 is Rs.150.99 crore.

The salient features of the performance during 2015-16 and projected Outcomes of 2016-17 are as under.

I. Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY):

The DDUGJY is a new scheme introduced in 2014-15. This new scheme which subsumes the erstwhile Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) Scheme envisages separation of agricultural and non-agricultural feeders and strengthening and augmentation of sub-transmission & distribution infrastructure. The Budget Estimate for 2016-17 is Rs.3000 crore.

The Annual Budget for 2015-16 was Rs.4500 crore against which an amount of Rs.4211.78 crore has been released by Ministry of Power as on 31.12.2015. During the year 2015-16 (upto 31.12.2015), electrification of 3541 un-electrified villages, intensive electrification of 21506 villages have been completed and electricity connections were given to 10.45 Lakh BPL households.

The cumulative achievement as on 31.12.2015 are electrification of 112577 un-electrified villages, Intensive electrification of 333858 villages and release of electricity connections to 228.31 Lakhs BPL households.

The target for the year 2016-17 is electrification of 30000 villages (including 8360 UEV) including intensive electrification of partially electrified villages offering electricity to 14 Lakh BPL Households. This will facilitate rural development, Employment generation and Poverty alleviation.

II. Integrated Power Development Scheme (IPDS):

Integrated Power Development Scheme (IPDS) is a new scheme introduced in 2014-15. This new scheme which subsumes the erstwhile R-APDRP envisages three major components namely improvement of sub-transmission and distribution system in urban areas, metering & IT enablement in distribution sector. A budgetary support of Rs.5500 crore is provided during

the year 2016-17 for the scheme. The grant component will be Rs. 2918.72 crore and the loan component will be Rs. 2581.28 crore.

Under erstwhile R-APDRP, Part-A (IT enabled system) projects worth Rs.5427.24 crore for 1409 towns, 72 Part-A (SCADA) projects worth Rs.1556.23 crore and 1258 Part-B projects worth Rs.32214.40 crore have been sanctioned till 31.12.2015.

Further, under IPDS, projects worth Rs.24,205 crore have been sanctioned for 3406 towns in 26 states/UTs.

III. Generation

The Central Sector electricity generation is planned and implemented through the various organizations. The details along with the highlights are as follows.

A. NTPC Ltd

The installed capacity of NTPC and its subsidiaries / Joint Ventures as on 31.01.2016 is 45,548 MW. The CAPEX outlay during 2015-16 is Rs 25,000 crore. This would result in commissioning of 2145 MW i.e. 400 MW from Koldam HEPP, 250 MW from Bongaigaon, 800 MW from Kudgi, 500 MW from Vindhyachal, 195 MW from Muzaffarpur (Joint Venture with BSEB). The outlay will also result in substantial physical progress of the projects scheduled to be commissioned in the XII / XIII plan period.

The CAPEX outlay for 2016-17 is Rs. 30000 crore is expected to result in commissioning of 3788 MW i.e. 250 MW from Bongaigaon, 800 MW from Kudgi, 660 MW from Mouda-II, 660 MW from Solapur, 250 MW from Anantpur Solar, 8 MW from Singrauli small hydro, 500 MW from Nabinagar TPP (Joint Venture with Indian Railways) and 660 MW from Meja (Joint Venture with UPRVNL).

B. NHPC Ltd

NHPC's total installed capacity including that of NHDC (Joint Venture Company with Govt. of Madhya Pradesh) is 6507 MW through 20 projects. During XII Plan, till date, NHPC has added 1212 MW viz. 231 MW Chamera-III in H.P, 44 MW of Chutak in J&K, 132 MW of Teesta Low Dam, 45 MW of Nimoo Bazgo, 240 MW of Uri-II & 520 MW Parbati-III in H.P. Further, NHPC is endeavoring to commission 490 MW Hydro Capacity from 160 MW of TLDP-IV in W.B. and 330 MW Kishanganga in J&K by the end of XII Plan. As such, by the end of XII Plan, NHPC total Installed Capacity is likely to reach at 6997 MW, including 1520 MW through NHDC.

The Plan Outlay BE 2015-16 of Rs. 4179.89 crores comprising IEBR of Rs. 3979.89 crores and GBS Rs. 200 crores was mainly for ongoing schemes viz. Parbati-II, Teesta Low Dam-IV, Subansiri Lower, Uri-II, Parbati-III and Kishanganga Project and new proposed projects viz. Kotli Bhel IA, Dibang, Teesta-IV & Tawang I & II.

The CAPEX outlay during 2016-17 is Rs.3957.72 crores comprising IEBR of Rs.3590.72

crores & GBS of Rs. 367.00 crores for Chutak, Nimoo Bazgo & Kishanganga HEPs. The outlay is mainly for presently ongoing schemes viz. Parbati-II, Teesta Low Dam IV, Subansiri Lower, Kishanganga HE Projects etc and new proposed projects viz. Tawang-I&II, Teesta –IV, Kotli Bhel IA etc. In addition, provision is also kept for survey & investigation works of future schemes and residual works/ balance payments of schemes completed by Mar'15 (Dulhasti, Dhauliganga, Sewa-II, Chamera-III, Chutak, TLDP-III, Nimoo Bazgo, Uri-II and Parbati-III).

C. NEEPCO

The installed capacity of NEEPCO is 1251.42 MW comprising 755 MW of hydro, 491.42 MW of thermal power and 5 MW Renewable (Solar) Power.

For the year 2015-16, NEEPCO an outlay of Rs 1421.69 crore (excluding DONER Grant of Rs 130.09 crore against Tuirial HEP, Mizoram) was approved comprising NBS of Rs 75 crore and IEBR of Rs 1216.60 crore. The major portion of this fund allocation was meant for construction of the ongoing projects viz. Kameng HEP (600 MW), Pare HEP (110 MW), Tuirial HEP (60 MW), Tripura Gas Based Project (101 MW) and Agartala Gas Turbine Plant – CC Extension Project (51 MW) and solar project (5 MW) at TGBP site. All these projects were scheduled for commissioning within the 12th Plan.–

The CAPEX outlay for the year 2016-17 of NEEPCO is Rs.890.91 crore excluding GBS of Rs 166.13 crore. Major portion of the GBS is for construction of the ongoing project viz. Kameng HEP (600 MW).

D. THDC India Ltd

THDCIL is at present generating power from Tehri HPP & Koteshwar HEP with total installed capacity of 1400 MW. Power generated is supplied to 09 beneficiaries States/UT of Northern Region. The capex outlay during 2015-16 is Rs1580.31 crore (including GBS of Rs.30 crore). During the FY 2015-16, THDCIL has generated 3403.88 MU of energy upto 31.12.2015.

The CAPEX outlay during the year 2016-17 is Rs.1439.37 crore (including GBS of Rs.40.00 crore) is mainly for execution of Tehri PSP (1000 MW), VPHEP (444 MW), Dhukwan SHP (24 MW), balance works of Koteshwar HEP (400 MW) and new projects.

E. SJVN Ltd

The capex outlay in respect of SJVN for 2015-16 is Rs. 1175.00 crores. This is mainly for 18 projects. The details of which is mentioned in the Annexure of Chapter-VI.

The CAPEX outlay for the year 2016-17 is Rs.1000.00 crores. This is mainly for 17 projects. The details of projects is mentioned in Chapter II.

F. Damodar Valley Corporation (DVC)

The Capex Outlay for 2015-16 was Rs. 3682.93 crore. During 2015-16, RTPS U # 1 &

2 (2 X 600 MW) is expected to be put under commercial operation in March' 2016. DVC has taken-up roof top Solar Project at DVC Towers for 53 KWp.

The Capex outlay for 2016-17 is Rs.3302.57 crore which would result in commercial operation of BTPS–A (1x 500 MW).

IV. Transmission

Power Grid Corporation of India Ltd.

POWERGRID made a capital investment of about Rs.16,030 Crore (upto 31st December 2015) during FY 2015-16 against the targeted outlay of Rs.22,500 crore (RE). During FY 2015-16 (upto 31st December 2015), POWERGRID has commissioned about 11,328 ckt.km. of transmission line and achieved about 14,295 MVA of transformation capacity addition.

The outlay of Rs.22,500 crore during FY 2016-17 would inter-alia result in 10,500 ckt. km. of stringing and 60 Nos. transformer erections.

V. Conservation and Energy Efficiency:-

During the year 2015-16 the Scheme was provided with a provision of Rs.110.00 crore (including Rs.50.00 crore for BEE & Rs. 60.00 crore for EC). The achievements during the FY 2015-16 may be seen in Chapter VI (Annexure).

An outlay of Rs.164.00 crore (Rs. 64.00 crore for BEE & Rs. 100 crore for Energy Conservation activities) has been kept for the year 2016-17 for Conservation and Energy Efficiency (including Rs.0.71 crore as EAP component). The anticipated outcome for 2016-17 is to achieve the target of reducing energy consumption and Energy Conservation related activities.

VI. NPTI

The outlay for the year 2015-16 was Rs.40.00 crore under Plan and Rs.6.40 crore under Non-Plan. The existing infrastructure would be upgraded by utilizing the fund provided by Ministry of Power so that trainees/students can be abreast with the latest technology in the world class environment with the estimated expenditure of Rs 33.00 crore under Plan and Rs.7.40 crore under non-plan during 2016-17.

VII. CPRI

The approved outlay in respect of CPRI for the year 2015-16 was Rs.125.00 crores for four major projects under 12th Plan namely (i) Augmentation Projects, (ii) Modernisation Projects, (iii) Establishment Projects and (iv) Research & Development projects of CPRI under 12th Plan. The two projects namely Augmentation & New Facilities Projects and Plan Research & Development projects of CPRI are under implementation.

The Annual Plan of CPRI for the year 2016-17 is Rs.125.00 crores. The budgetary

support is for funding projects which have been approved and are under implementation viz. (i) Augmentation Projects (ii) Modernisation Projects, (iii) Establishment Projects and (iv) Research & Development projects of CPRI under 12th Plan.

VIII. New Initiatives

a) Power for All

Power for All (24x7 PFA) is a joint initiative of the Government of India (GoI) and State Governments, aiming to achieve 24X7 availability of reliable power to all households, industrial, commercial and all other electricity consuming entities by the end of FY19. The initiative involves formulation of a road map to achieve the underlying objective of the PFA Program with the States. So far, MOUs (road maps) with the States of AP, Assam, Bihar, Chattisgarh, Goa, Gujarat, Haryana, Jharkhand, Karnataka, Kerala, Punjab, Rajasthan, Telengana, Uttarakhand have been signed.

b) Ujwal Discom Assurance Yojana

The Scheme – UDAY (Ujwal Discom Assurance Yojana) has been launched to improve financial and operational efficiencies of power Distribution Companies (DISCOMs). It envisages to reduce interest burden, cost of power and AT&C losses. Consequently, DISCOM would become sustainable to supply adequate and reliable power enabling 24x7 power supply. The scheme provides that States would take over 75% debt of Discoms, as on 30th September, 2015 in two years. So far 17 States have given their consent to join the Scheme UDAY and 06 States out of these have signed the MOU with the Ministry of Power.

c) Tariff Policy Amendments

The Union Cabinet in its meeting held on 20th January 2016 approved the proposal of the Ministry of Power for amendments in the Tariff Policy. For the first time a holistic view of the power sector has been taken and comprehensive amendments have been made in the Tariff Policy 2006. The amendments are also aimed at achieving the objectives of UDAY (Ujwal DISCOM Assurance Yojana) with a focus on 4 Es: Electricity for all, Efficiency to ensure affordable tariffs, Environment for a sustainable future, Ease of doing business to attract investments and ensure financial viability. These amendments will benefit power consumers in multiple ways. While reducing the cost of power through efficiency, they will spur renewable power towards environment and India's energy security. These holistic amendments to Power Tariff Policy which complement schemes like UDAY will ensure the realization of our vision of 24X7 affordable power for all.

IX. Monitoring Mechanism

The Ministry of Power has adopted a robust monitoring system for the capacity addition programme so as to see that the projects are executed in time. Following measures have been taken for timely commissioning of ongoing power projects:

- i. Central Electricity Authority (CEA) monitors the progress of under construction power projects through frequent site visits and interaction with the developers and equipment suppliers. CEA holds review meeting periodically with the developers and other stakeholders and identify issues critical for commissioning of projects and help in resolving them.
- ii. Regular reviews are also undertaken by Ministry of Power, Ministry of Heavy Industries and Cabinet Secretariat to identify the constraint areas and facilitate faster resolution of Inter-Ministerial and other outstanding issues.
- iii. The Power Projects Monitoring Panel (PPMP) has been set up by the Ministry of Power for monitoring of ongoing Thermal and Hydro Generation Projects targeted for commissioning during the 12th Plan and beyond alongwith the associated transmission system.
- iv. The review meetings are held by Secretary (Power) to monitor completion of power projects being executed by BHEL with Deptt. of Heavy Industries.
- v. Issues are also raised in PRAGATI, for proactive governance and timely implementation, as and when require.

X. Public Information System

Detailed Demands for Grants and Outcome Budget is posted on the website www.powermin.nic.in of the Ministry of Power after laying in Lok Sabha/Rajya Sabha for information.

Chapter – I

Introduction

- 1.1 The Ministry of Power started functioning independently with effect from 2nd July, 1992. Earlier it was known as the Ministry of Energy comprising the Departments of Power, Coal and Non-Conventional Energy Sources.
- 1.2 Electricity is a concurrent subject at entry number 38 in the List III of the Seventh Schedule of the Constitution of India. The Ministry of Power is primarily responsible for the development of electrical energy in the country. The Ministry is concerned with perspective planning, policy formulation, processing of projects for investment decisions, 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. The Ministry has developed its website www.powermin.nic.in
- 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) and 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 various Acts like, 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 Bhakra Beas Management Board as provided in the Punjab Reorganisation Act, 1966 (31 of 1966) as amended from time to time;
 - All matters relating to Central Electricity Authority, Central Electricity Regulatory Commission and Appellate Tribunal for Electricity;
 - Rural Electrification;
 - Power schemes and issues relating to power supply/development schemes/programmes/ decentralized and distributed generation in the States and Union Territories;
 - All matters concerning energy conservation and energy efficiency pertaining to Power Sector.

- Matters relating to the following Undertakings/Organizations:
 - a. Damodar Valley Corporation;
 - b. Bhakra Beas Management Board (except matters relating to irrigation);
 - c. NTPC Limited;
 - d. NHPC Limited;
 - e. Rural Electrification Corporation Limited;
 - f. North Eastern Electric Power Corporation Limited (NEEPCO);
 - g. Power Grid Corporation of India Limited (PGCIL);
 - h. Power Finance Corporation Limited;
 - i. Tehri Hydro Development Corporation;
 - j. Satluj Jal Vidyut Nigam Limited;
 - k. Central Power Research Institute;
 - l. National Power Training Institute;
 - m. Bureau of Energy Efficiency;

ORGANISATIONAL SET-UP

Shri Piyush Goyal is the Minister of State (Independent charge) for Power with effect from the 27th May, 2014 (F/N).

Shri Pradeep Kumar Sinha assumed charge as Secretary in the Ministry of Power with effect from the 1st July, 2013. He demitted office on 02.06.2015.

Shri P.K.Pujari assumed charge as Secretary in the Ministry of Power with effect from the 4th June, 2015. The Ministry has two posts of Additional Secretaries, six posts of Joint Secretaries including the Financial Adviser and one Economic Adviser.

Shri B.P.Pandey, Additional Secretary, assumed charge on 03.08.2015. He oversees the work relating to Administration; Parliament; Official Language; Public Grievances; RTI Cell; Information Technology; International Co-operation; Climate Change; Energy Conservation; Energy Efficiency; Policy & Planning, Power Projects Monitoring Panel; Coordination; Training & Research including CPRI and NPTI; Hydro Power including CPSUs namely NHPC, SJVNL, NEEPCO, THDC and Bhakra Beas Management Board.

Shri B.N.Sharma, Additional Secretary, assumed charge on 30.07.15. He oversees the work relating to Reforms & Restructuring (including administration of Electricity Act, 2003, National Electricity Policy, Tariff Policy, CERC, JERC, APTEL); Transmission including Power Grid Corporation of India Limited; Power System Operation Corporation (POSOCO); Grid Integration of renewable energy; Operation & Monitoring; Power Finance Corporation; Rural Electrification; Rural Electrification Corporation; Financial Restructuring Plan; Smart Grid; Thermal Power including NTPC Ltd. and Damodar Valley Corporation and Ultra Mega Power Projects. Shri B. N Sharma has since demitted office on 17^h February, 2016.

1.4 The allocation of work amongst the six Joint Secretaries and Economic Adviser (EA) in the Ministry of Power is as under:

- i) Administration; Parliament; Official Language; Public Grievances; RTI Cell; Information Technology; International Co-operation and Climate Change; Cadre Management of Central Power Engineering Service(CPES) of CEA.
- ii) Thermal; NTPC Ltd.; Damodar Valley Corporation; Ultra Mega Power Projects; Independent Power Producers (IPP); Fuel Supply and Vigilance & Security.
- iii) Integrated Power Development Scheme, Power Finance Corporation, Rural Electrification; Rural Electrification Corporation; Deendayal Upadhyaya Gram Jyoti Yojana; National Electricity Fund; Financial Restructuring Plan and Smart Grid.
- iv) Hydro Power including CPSUs namely NHPC,SJVNL,NEEPCO,THDC and Bhakra Beas Management Board.
- v) Internal Finance; Budgetary Control, Expenditure Management
- vi) Reforms & Restructuring (including administration of Electricity Act, 2003; National Electricity Policy; Tariff Policy; CERC;JERC;APTEL and Model Bidding Documents for procurement of Power);Transmission; Power Grid Corporation of India Limited; Power System Operation Corporation (POSOCO); Grid Integration of renewable energy; Operation & Monitoring.
- vii) Policy & Planning, Power Projects Monitoring Panel and Coordination; All Tax Related Matters; Nodal officer for e-Samiksha and VIP Letter Monitoring System Portal.Training & Research including CPRI and NPTI; Energy Conservation; Energy Efficiency and Bureau of Energy Efficiency.

There is a Principal Accounts Office headed by the Chief Controller of Accounts who in turn reports to the Financial Adviser in the Ministry of Power. Matters relating to reservations for SC/ST, Physically Handicapped and Ex-Servicemen in the Ministry including PSUs under its administrative control are dealt with by the Dir (SC/ST) who is also the Liaison Officer for SC/ST and DS (Coord.) is the Liaison officer for OBCs.

1.5 The various organizations in the Ministry are as under :

a) STATUTORY BODIES (Non-Commercial):

i) Appellate Tribunal for Electricity (APTEL)

An Appellate Tribunal for Electricity was set up vide notification dated 7 April, 2004, to hear appeals against the orders of the adjudicating officer or the appropriate commission under the Electricity Act, 2003. The Tribunal also has original jurisdiction to hear petitions under Section 121 of the Act. Delhi is the headquarters of the Tribunal. Under the provisions of the Petroleum and Natural Gas Regulatory Board Act, 2006, APTEL is the Appellate Tribunal for the purpose of that Act. Ministry of Petroleum and Natural Gas has also appointed one Technical Member in APTEL under the provision of the said Act. The Appellate Tribunal consists of a Chairperson, one Judicial Member and three Technical Members, including the Technical Member (P&NG). Every Bench constituted by the Chairperson includes at least one Judicial Member and one Technical Member. Circuit benches of APTEL at Chennai, Mumbai and Kolkata have been constituted vide Notification dated 1.5.2012

ii) Central Electricity Regulatory Commission (CERC)

The Central Electricity Regulatory Commission (CERC), an independent statutory body with quasi-judicial powers, (originally constituted on 25 July 1998 under the erstwhile Electricity Regulatory Commissions Act, 1998) has been continued under the Electricity Act, 2003. The Commission consists of a Chairperson and four other Members including the Chairperson, Central Electricity Authority as an ex-officio Member. The main functions of CERC include regulation of tariff of generating companies owned or controlled by the Central Government or if such generating companies enter into or otherwise have a composite scheme for generation and sale of electricity in more than one State, regulation and determination of tariff of inter-State transmission of electricity, issuing licenses to persons to function as transmission licensee and electricity traders with respect to their inter-State operations, adjudicating upon disputes involving generating companies or transmission licensee, specifying Grid Code having regard to Grid Standards; to specify and enforce the standards with respect to quality, continuity and reliability of service by licensees and fixing the trading margin in the inter-State trading of electricity, if considered, necessary.

(iii) Central Electricity Authority

The Central Electricity Authority (CEA) is a statutory organization originally constituted under Section 3 of the repealed Electricity (Supply) Act, 1948 and continued under Section 70 of the Electricity Act, 2003. It was established as a part-time body in the year 1951 and made a full-time body in the year 1975.

As per section 70(3) of the Electricity Act, 2003, the Authority shall consist of not

more than fourteen (14) Members (including its Chairperson) of whom not more than 8 shall be full-time members to be appointed by the Central Government.

CEA is headed by a Chairperson who as the Chief Executive of the Authority oversees largely the development of Power Sector in the country. There are six (6) Wings in CEA namely Planning, Hydro, Thermal, Grid Operation & Distribution, Economic & Commercial and Power System, each headed by a Member of the Authority. Under each Member, there are technical divisions, each headed by an officer of the rank of Chief Engineer. At present, there are twenty nine Divisions in CEA headquarter at New Delhi.

In addition, CEA has fourteen (14) subordinate offices, viz. five (5) Regional Inspectorate Organisations (RIO), four (4) Regional Power Survey Organisation (RPSO) and five (5) Regional Power Committees located in various parts of the country. The CEA is responsible for overall power sector planning, technical coordination, according concurrence to hydro-electric schemes and timely completion of projects, specifying of technical standards, safety requirements, Grid Standards as well as conditions for installation of meters applicable to the electricity sector of the whole country. CEA advises the Central Government on the National Electricity Policy. It also advises the Central & State Governments as well as the Electricity Regulatory Commissions on all technical matters relating to generation, transmission and distribution of electricity. It also has the mandate to collect, record and makes public data related to all segments of the electricity sector, carry out investigations and promote research.

The functions and duties of the Authority are delineated under Sector 73 of the Electricity Act, 2003. Besides, CEA has to discharge various other functions as well under Section 3, 8, 53, 55 and 177 of the Electricity Act, 2003. Section 73 lists the details of functions and duties as the Central Govt may prescribe or direct and mentions specific functions and duties. Section 3 mandating the Central Government for formulation National Electricity Policy and Plan envisages consultation with the CEA, and it is required to formulate a National Electricity Plan in line with the National Policy. Section 8 provides for concurrence of CEA for putting up plants for Hydro Electric Generation Section 53 dealing with Provision Relating to Safety and Electricity Supply envisages consultation with the State Government by the CEA before prescribing suitable measures. Section 55 (2) provides that for proper accounting and audit in the generation, transmission and distribution or trading of electricity, the Authority may direct the installation of meters, by a generating company or licensee at such stages of generation, transmission or distribution or trading of electricity and at such locations of generation, transmission or distribution or trading, as it may deem necessary. Section 177 lists areas where the CEA has the powers to make regulations.

iv) Bureau of Energy Efficiency (BEE)

The BEE was established on 1st March 2002, with the mission to develop appropriate policies and strategies with a thrust on self-regulation and market principles. The

prime objective of these measures is to stimulate reduction of energy intensity of Indian economy. In order to translate the objectives into result-oriented action the broad functions of BEE include:

- To be the policy advisor to the Central and State Governments.
- To co-ordinate policies and programmes on efficiency use of energy and its conservation with the involvement of stakeholders.
- To plan, manage and implement energy conservation programmes as envisaged in the EC Act.
- To demonstrate energy efficiency delivery mechanisms, as envisaged in the EC Act, through private –public partnership.
- To establish systems and procedures to measure, monitor and verify energy efficiency and conservation efforts and programmes.
- To leverage multi-lateral, bi-lateral and private sector support in implementation of programmes and projects on efficient use of energy and its conservation.

b) STATUTORY BODIES (Commercial)

(i) Damodar Valley Corporation (DVC)

Damodar Valley Corporation, the first major multi-purpose integrated river valley project of the country conceived in line with Tennessee Valley Authority (TVA) came into existence on July 7, 1948 by an Act of Parliament. In keeping with industrialization in DVC command area, power generation, transmission and distribution gained priority for providing electricity to the core industries, like Steel, Coal, Railways and other industries/consumers to respective State Electricity Boards. With the passage of time and shift in national priorities, power generation with associated transmission and bulk activities gained priority in Damodar Valley Corporation. Other objectives of DVC, however, received due attention and services as part of its overall responsibilities and commitment. At present, Damodar Valley Corporation is supplying power within the covered area of 24,235 sq. km. known as the DVC Command Area and also exporting power to other States beyond the Damodar Valley. The present installed operating Capacity is 6357.20 MW comprising of Thermals 6210 MW (excluding JV projects MPL 2 X 525 MW and BPSCL 302 MW) & Hydel 147.20 MW.

Presently DVC has 11 nos. 220KV and 29 nos. 132KV Sub-stations (including power house switchyards). DVC Transmission lines comprise of 165 Circuit-KM of 400KV line, 2338 Circuit-KM of 220KV line and 3984 Circuit-KM of 132KV line. DVC has also four Dams, a barrage and a network of canals that play an effective role in water management.

(ii) Bhakra Beas Management Board (BBMB), Chandigarh

Bhakra Beas Management Board (BBMB) was constituted under Section 79 of the Punjab Re-organization Act, 1966 for the administration, maintenance and operation of Bhakra Nangal Project with effect from 01 October 1967. The Government of India transferred the Beas Project Works, on completion, from Beas Construction Board (BCB) to BMB as per Section 80 of the Act and Bhakra Management Board was renamed as Bhakra Beas Management Board (BBMB) with effect from 15 May, 1976. Bhakra Beas Management Board is responsible for the administration, operation and maintenance of Bhakra Nangal Project, Beas Satluj Link Project and Pong Dam including Power House and a network of transmission lines and grid sub-stations. The Board also regulates the supply of water from Bhakra-Nangal and Beas Projects to the States of Punjab, Haryana and Rajasthan and regulation of supply of power generated at the Bhakra-Beas Power Houses to power utilities in-charge of distribution of power in the participating States. BBMB also provides Engineering and related technical and consultancy services in various fields of Hydro Electric Power and Irrigation Projects.

c) PUBLIC SECTOR UNDERTAKINGS

(i) NTPC Limited

NTPC was setup in 1975 as a central sector generating company for the development of thermal power. The corporation has grown rapidly to become the largest thermal power generating company in India. However, in addition to attaining large size, the operations of the company have also become diverse and are now not limited to thermal power only. Company has diversified into hydro power, power trading, coal mining etc. As on 31.01.2016, the authorized share capital of NTPC is Rs 10,000 crore and the paid up share capital is Rs 8,245.46 crore. The corporation is at present engaged in operating eighteen (18) coal based power stations, seven (7) gas/liquid based power stations one (1) hydro station and eight (8) solar PV stations on its own and six (6) coal based power stations and one (1) gas based power station through Joint Ventures. NTPC (including its JVs and subsidiaries) has an installed capacity of 45,548 MW as on 31.01.2016.

(ii) Power Grid Corporation of India Limited (POWERGRID)

Power Grid Corporation of India Limited (POWERGRID) was incorporated as a Government of India enterprise on 23rd October, 1989 under the Companies Act, 1956 with an authorized share capital of Rs.5,000 crore. The authorized share capital was later enhanced to Rs.10,000 crore in 2007-08 and paid up capital as on 31.03.2015 is Rs.5231.59 crore. As on 31st December 2015, POWERGRID is operating about 126,965 ckt. km. of transmission lines and 205 sub-stations having transformation capacity of about 246,004 MVA. The inter-regional transmission capacity of the National grid has been enhanced to about 55,350 MW (till 31st December 2015). The transmission system availability is maintained consistently

above 99% by deploying the best Operation and Maintenance practices at par with international utilities.

(iii) NHPC Limited

NHPC Ltd. was incorporated in 1975 under Companies Act 1956. NHPC is a schedule “A” Enterprise of the Government of India with an authorized share capital of Rs.15,000 crore and paid up capital as on 31.03.2015 is Rs.11071 crore. NHPC is the largest organization for hydro power development in India, with capabilities to undertake all the activities from conceptualization to commissioning of hydro projects.

The main objective of NHPC is to plan, promote and organize an integrated and efficient development of power in all aspects through Conventional and Non-Conventional Sources in India and abroad including planning, investigation, research, design and preparation of PFR and DPRs, construction, generation, operation and maintenance of power stations and projects, transmission, distribution, trading and sale of power generated at Stations.

The total installed capacity of NHPC as on date including that of NHDC (Joint Venture Company with Govt. of Madhya Pradesh) is 6507 MW through 20 projects. The Corporation is presently engaged in construction of 4 hydro projects with aggregate capacity of 3290 MW and a 50MW Wind Power Project.

(iv) North Eastern Electric Power Corporation (NEEPCO)

North Eastern Electric Power Corporation Ltd. (NEEPCO), a Schedule-A Miniratna (Category-I) Company was constituted in 1976 under the Indian Companies Act, 1956 as a wholly owned Government of India Enterprise under the Ministry of Power to plan, promote, investigate, survey, design, construct, generate, operate and maintain Hydro and Thermal Power Stations. NEEPCO has an authorized share capital of Rs 5000 crore with installed capacity of 1251.42 MW comprising 755 MW of hydro, 491.42 MW of thermal power and 5 MW Renewable (Solar) Power. The Corporation is presently implementing 3 (three) nos. of hydro in the NER for commissioning within 12th FYP. In the renewable sector also the Corporation is all set for setting up two Grid Interactive Solar Power Plants of 3 MW and 2MW within Kopili HEP project area and Lanka, Assam respectively, within the 12th FYP. The Corporation is relentlessly working for its future growth by setting up more projects in the country, particularly in NER, in the hydro, thermal and renewable sector. Of late NEEPCO is also foraying in the Joint-Venture mode for setting up of power projects in the country. The Corporation has already inked the Share Holders’ Agreements with resourceful private players of the country for setting up a handful of attractive power projects in the country including in the renewable sector viz. one 50 MW Solar Power Project in Madhya Pradesh, 120 MW Dibbin HEP in Arunachal Pradesh. NEEPCO has a target to add 2500 MW of Renewable Energy by 2019-20.

(v) Rural Electrification Corporation Limited (REC)

Rural Electrification Corporation Limited (REC) was incorporated in the year 1969 to facilitate the development of power infrastructure in the rural India. The authorized Share Capital of the Corporation is Rs.1200 crore and the Paid up Capital as on 31st March 2015 stood at Rs.987.459 crore. The main objectives of the Corporation are to promote and finance projects aimed at Integrated System Improvement, Power Generation, Promotion of decentralized & non-conventional energy sources, energy conservation, renovation & maintenance, power distribution with focus on pump sets energisation, rural households electrification and other related works in rural & urban areas. REC, is the nodal agency for the implementation of Deen Dayal Upadhyaya Gram Jyoti Yojana.

(vi) Power Finance Corporation (PFC)

Power Finance Corporation Limited (PFC), is a Non-Banking Financial Company, which was incorporated on 16 July, 1986 as part of Government of India's initiative to enhance funding of power projects in India, with an objective to provide financial resources and encourage flow of investments to the power and associated sectors. PFC has authorized share capital of Rs 2000 crore & paid up share capital of Rs 1320.04 crore as on 31.12.2015.

PFC's priorities include not only accelerating the pace of existing business of funding generation, transmission and distribution projects, but also to exploit the new opportunities available in the sector. PFC has developed various strategic business units, focusing on different business segments – conventional lending to generation, transmission and distribution projects; consortium lending to generation, transmission and distribution projects; lending to power equipment manufacturers and fuel producers and suppliers. PFC has three wholly owned subsidiaries – PFC Consulting Limited (PFCCL) provides out consultancy in power sector, PFC Green Energy Limited (PFCGEL) extends financing exclusively to renewable and non conventional sources of energy and PFC Capital Advisory Services (PFC CAS) provides financial advisory services.

PFC , is the nodal agency for implementation of the Integrated Power Development Scheme. It is also the bid process coordinator for Ultra Mega Power Projects (UMPPs) and Independent Transmission Projects, based on tariff based competitive bidding process.

d) JOINT VENTURE CORPORATIONS

(i) THDC India Limited

THDC India Limited is a Joint Venture of Govt. of India and Govt. of Uttar Pradesh. The Equity is shared between Gol and GoUP in the ratio of 3:1. The Company was incorporated in July 1988 to develop, operate & maintain the 2400 MW Tehri Hydro Power Complex and other hydro projects. The Authorised share capital of

Corporation is Rs.4000 crore. Paid up Capital of the Company as on 31.03.2015 is Rs.3528.90 crore.

The 2400 MW Tehri Hydro Power Complex on the river Bhagirathi comprises of Tehri Dam & HPP (1000MW), Koteshwar HEP (400MW) and Tehri PSP (1000MW). The Corporation has successfully commissioned the Tehri Dam & HPP (1000 MW) Stage-I and Koteshwar HEP (400 MW) during the Xth and XIth plans respectively. 1000 MW Tehri PSP is under construction and is scheduled to be commissioned in XIIIth Plan. Vishnugad Pipalkoti Hydro Electric Project (444 MW) on the river Alaknanda in Uttarakhand is under construction. The project is funded by World Bank. The Project is scheduled to be commissioned in XIIIth Plan. Dhukwan 24 MW SHP in Distt. Jhansi (UP) is under construction stage and scheduled to be commissioned in XIIIth Plan.

THDCIL has diversified into Thermal Power. Khurja Super Thermal Power Plant (2X660 MW) in Bulandshahr Distt which is to be implemented by THDCIL for which pre investment activities like transfer of land, re-routing of national highway etc. are in progress. THDCIL has also diversified into non-conventional and renewable sources of energy such as Wind and Solar. THDCIL has signed MoU with Solar Energy Corporation of India (SECI) on 13.02.2015 for setting up Grid Connected Solar Power Projects up to 250 MW capacity. THDCIL has also awarded EPC Contract for 50 MW Wind Power at Patan wind farm site, Gujarat on 30.10.15

THDCIL is at present generating power from Tehri HPP & Koteshwar HEP with total installed capacity of 1400 MW. Power generated is supplied to 09 beneficiaries States/UT of Northern Region. During the current FY 2015-16, THDCIL has generated 3403.88 MU of energy upto 31.12.2015.

(ii) SJVN Limited

SJVN Limited, under administrative control of Ministry of Power, Govt. of India was incorporated on May 24, 1988 as a joint venture of Government of India (GOI) and Government of Himachal Pradesh (GOHP) (equity participation in the ratio of 75:25) to plan, investigate, organize, execute, operate and maintain hydro electric power projects in the Satluj river basin in the state of Himachal Pradesh and at any other place.

The present authorized share capital of SJVN is Rs.7000 crore. The 1500 MW Nathpa Jhakri Hydro Power Station, NJHPS (the largest underground hydro electric power project) was the first project executed by SJVN, all units of which were commissioned by May 18, 2004. Further, SJVN had successfully commissioned all the six units of 412 MW Rampur Hydro Power Station in Himachal Pradesh. In addition, SJVN has commissioned 56 Wind Electric Generators of 47.6 MW Khirvire Wind Power Project in Maharashtra.

e) AUTONOMOUS BODIES:

(i) National Power Training Institute (NPTI)

National Power Training Institute (NPTI) an ISO 9001 & ISO 14001 organization, was set up by the Government of India under the Ministry of Power to function as an apex body at the national level for development of human resources for the power & energy sectors. Its corporate office is located at Faridabad (Haryana). NPTI operates on an all India basis through its Regional Institutes located at Badarpur (New Delhi), Neyveli (Tamil Nadu), Durgapur (West Bengal), Guwahati (Assam) and Nagpur (Maharashtra). In addition NPTI also has a Power System Training Institute (PSTI) & Hot Line Training Centre (HLTC) at Bengaluru (Karnataka), Centre for Advanced Management and Power Studies (CAMPS) at Faridabad (Haryana), NPTI (Hydro Power Training Centre), Nangal. Two more new Institutes are being set up at Alappuza, Kerala and Shivpuri, M.P.

(ii) Central Power Research Institute (CPRI)

The Central Power Research Institute (CPRI) established by the Government of India in 1960 was re-organised into an autonomous society in 1978 to function as a National Power Research Organization and to serve as National Testing and Certification Authority for the purpose of certification of rating and performance to ensure availability of equipment of adequate quality for use under conditions prevalent in Indian Power Systems.

The Institute has its Head Office & major laboratories at Bangalore and Units at Bhopal, Hyderabad, Koradi, Noida, Kolkata & Guwahati. The other activities of the Institute are:

- Power System studies covering Load Flow, Short Circuit and Relay Co-ordination
- Condition Monitoring and Diagnostics Services
- Energy Audit
- Communication Protocol Testing
- Third Party Inspection Services
- Seismic Qualification of Power Equipment
- Customized Training Programmes
- Protection Audit
- Vendor Analysis

CPRI has expertise in the area of simulation, diagnostics, system analysis and testing. CPRI laboratories have modern equipment needed for power system simulation, short circuit testing, diagnostics of equipment, materials engineering, Seismic qualification etc. CPRI has experienced faculty in different subjects concerned to power sector with practical experience in their respective areas of interest, as well as extensive experience in presenting courses/ seminars. The Institute organizes regularly training programs, symposium, workshops, seminars/ conferences etc.

Programmes and Schemes Implemented by the units/organizations of the Ministry :

1.6 The Schemes and Programmes being implemented under the plan budget can broadly be categorized under eight major groups . These groups are (i) Assistance to CPSEs, (ii) Statutory Authorities, (iii) Research and Training, (iv) Deen Dayal Upadhyaya Gram Jyoti Yojana, (v) Integrated Power Development Scheme, (vi) Conservation and Energy Efficiency, (vii) Strengthening of Power Systems and (viii) Power System Development Fund. The Ministry of Power also receives Non Plan Support for the main Secretariat and some of the autonomous/ statutory bodies. The Plan Schemes are briefly outlined below :

Assistance to CPSEs

1.6.1 Under this group are schemes/ programmes for which budgetary support is provided to the CPSE's falling within the administrative control of Ministry of Power. The CPSEs supplement the Budgetary Support with IEBR to meet the Annual capital expenditure needs. The Annual Plan CAPEX Outlay is Rs.63,256.70 crore comprising of IEBR of Rs.62,683.57 crore and GBS Rs.573.13 crore during 2016-17. The projects/schemes and the CPSEs receiving budgetary support and the quantum of support envisaged thereto during 2016-17 is briefly outlined below :

a) National Hydro Electric Power Corporation Limited (NHPC)

A budgetary support of Rs. 367 crores has been provided for meeting in part the need for funds for Chutak HEP/ Nimoo Bazgo as per the requirement likely to arise during 2016-17. The Internal and Extra Budgetary Resources (IEBR) component will be Rs. 3590.72 crore for various projects of NHPC.

b) Tehri Hydro Development Corporation (THDC)

A budgetary support of Rs. 40 crore is envisaged for meeting in part the expenditure on Vishnu Gadh Pipal Koti HEP as per requirement arising during the year 2016-17. The estimated resource generation from IEBR for all its projects during 2016-17 is envisaged to be Rs.1399.37 crore.

c) North Eastern Electric Power Corporation (NEEPCO)

The North Eastern Electric Power Corporation Limited (NEEPCO), has been set up with 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. A budgetary support of Rs. 166.13 crore is provided for meeting part of the expenditure on Kameng HEP as per the requirements likely to arise during the year 2016-17. The IEBR estimated to be raised for all its projects during the year 2016-17 will be Rs.890.91 crore.

Statutory Authorities

1.6.2 Under this group are statutory bodies which receive assistance for both plan and non plan expenditure.

a) Central Electricity Authority

The Central Electricity Authority (CEA) as a statutory organization is responsible for overall power sector planning, coordination, according concurrence to hydro-electric schemes, promote and assist the timely completion of projects, specifying technical standards, safety requirements, Grid Standards as well as conditions for installation of meters applicable to the Power Sector of the country. A budgetary assistance of Rs. 10 crore is provided to CEA for implementing its plan schemes.

b) JERC for UTs and Goa

No Plan assistance is being provided to the Commission. A non plan assistance of Rs.6.81 crore is being provided during FY 2016-17 for meeting their regular establishment expenditure.

c) Appellate Tribunal for Electricity

No Plan assistance is being provided. A non plan assistance of Rs.10.97 crore is being provided during 2016-17 for meeting their regular establishment expenditure.

d) Forum of Regulators

There is a provision of Rs.1.00 crore in 2016-17 to enable Forum of Regulators to carry out activities of capacity building and avail consultancy services.

Deen Dayal Upadhyaya Gram Jyoti Yojana

1.6.4 Government of India had 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 & nonagricultural consumers (b) Strengthening and Augmentation of 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 substations and Metering at all levels. Under the scheme, Govt. of India is providing financial support in the form of grant to

the Discoms for implementation of the scheme. All Discoms including Private Sector Discoms are eligible for availing financial support under the scheme and REC is the designated Nodal Agency for implementing the scheme. The erstwhile scheme RGGVY has been subsumed in DDUGJY as its Rural Electrification component. A budgetary support of Rs.3000 crore is provided for the scheme during 2016-17.

Integrated Power Development Scheme

1.6.5 The objective of the scheme is to provide 24x7 power supply for consumers, reduction of AT&C losses and 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. The erstwhile scheme of R-APDRP under which assistance in the form of loans was being provided has been subsumed in IPDS. A total budgetary support of Rs.5500 crore is envisaged during the year 2016-17 for the scheme. The grant component will be Rs. 2918.72 crore and the loan component will be Rs. 2581.28 crore.

Conservation and Energy Efficiency

1.6.6 There are two components namely Scheme Bureau of Energy Efficiency and Scheme Energy Conservation. Plan assistance is being provided to Bureau of Energy Efficiency (BEE) for implementation of various energy efficiency initiatives in the areas of household lighting, commercial buildings, Standards & Labeling appliances, Demand Side Management in Agriculture or Municipalities SMEs and large industries including the initiation of the process for development of Energy Consumption norms for industrial sub sectors, capacity building of SDAs, Discoms etc. A budgetary support of Rs. 64 crore is provided during 2016-17. Under the Energy Conservation Programme the funds are provided for carrying out awareness creation on Energy Conservation through print, electronic and other media for general public. Continuation of Energy Conservation awards and paintings competition on Energy Conservation. and also to implement the National Mission for Enhanced Energy Efficiency (NMEEE) and to upscale the efforts to create and sustain market for energy efficiency to unlock investments. A provision of Rs. 100 crore has been provided during 2016-17 for Energy Conservation programmes..

Strengthening of Power System

a) Smart Grid

The scheme envisages setting up of an institutional mechanism by launching "National Smart Grid Mission" which would serve the need of an electrical grid with automation, communication and IT systems that can monitor power flows from points of generation to point of consumption and ensure control of power flow or curtailment of loads matching generation on real time basis. A budgetary support of Rs. 30 crore is provided during 2016-17.

b) Green Energy Corridor

The scheme is for maximization of renewable energy generation and integration with the main grid without compromising on the security and stability of power system. The scheme envisages setting up of a Renewable Energy Management Centre (REMC). During the year 2016-17, only a token provision of Rs.0.10 crore has been proposed.

c) National Electricity Fund (Interest Subsidy Scheme).

The scheme envisages provision of interest subsidy on loans to be disbursed to the Distribution Companies(DISCOMS) both in the Public and Private Sector, for improvement of the distribution network for areas not covered by erstwhile RGGVY and RAPDRP schemes (since subsumed in DDUGJY and IPDS respectively) Project areas. The pre condition for eligibility are linked to certain reform measures taken by States and the amount of interest subsidy is linked to the progress achieved in reforms linked parameters. A provision of Rs.25 crore is provided during 2016-17 for the scheme.

d) Financial Support for Debt Restructuring Discoms

The scheme has been formulated and approved by Govt. to enable the turn around of the State DISCOMs and ensure their long term viability. The scheme contains measures to be taken by the state DISCOMs and State Govt. for achieving financial turnaround by restructuring their debt with support through a Transitional Finance Mechanism by Central Govt. A token provision of Rs.0.01 crore has been provided during the year 2016-17.

e) Power System Operation Corporation Ltd. (POSOCO)

Government approved conversion of POSOCO (a subsidiary of PGCIL) into a standalone independent Government Company. In the process, an institutional framework for an independent, secure and reliable power system operation at the national level has been put in place, as mandated under the Electricity Act, 2003. POSOCO operates the National Load Despatch Centre (NLDC) and Regional Load Despatch Centres (RLDCs) which are also responsible for operating/regulating the country wide vibrant electricity market. POSOCO is also the nodal agency for Renewable Energy Certificate (REC) mechanism, transmission pricing, short term open access, deviation settlement mechanism, Power System Development Fund (PSDF) etc. the manpower transfer scheme for POSOCO has since been approved by the Ministry of Power after consultation with Department of Public Enterprises and other stakeholders. A provision of Rs.81.21 crore has been provided during 2016-17 for the purpose of acquiring the entire shares of POSOCO currently held by PGCIL.

f) 220 kV transmission line from Srinagar to Leh via Kargil

The Cabinet Committee on Economic Affairs approved the scheme on 2.1.2014 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). A budget provision of Rs.250 crore is provided during 2016-17.

g) Power System Improvement in North Eastern States excluding Arunachal Pradesh and Sikkim.

The scheme provides for funding of capital expenditure on improving the Power Systems. The project will partly be funded with World Bank assistance and partly with budgetary support. The project for system improvement will benefit six NER states viz. Assam, Manipur, Meghalaya, Mizoram, Tripura and Nagaland. A provision of Rs.234 crore (including an Externally Aided Project component of Rs.110 crore) has been provided during 2016-17.

h) 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. A budget provision of Rs.273 crore is provided during 2016-17.

i) Funds for Evaluation Studies and Consultancy

This provision is for conducting evaluation studies of various projects/programmes/schemes. A token provision of Rs.0.01 crore is provided during 2016-17.

j) Comprehensive Award Scheme Comprehensive Award Scheme is to inculcate

competitive spirit and to motivate higher level of efficient and economic operation in the field of construction operation and maintenance of thermal/hydro/ transmission projects, implementation of distribution reforms, rural distribution franchisees, environment performance, community development and safety records. A provision of Rs. 54 lakh has been provided during 2016-17.

k) Power System Improvement Fund (PSDF)

PSDF is to be utilized partly for funding of proposals related to safe operation of Grid like installation of protection system, renovation and modernisation (R&M) of transmission and distribution system for relieving congestion etc. A part of fund is also meant to provide subsidy assistance to DISCOMS for purchase of power from standard gas based power plants providing electricity from imported e-bid RLNG. The estimated assistance during 2016-17 is envisaged at Rs.400 crore (Non Gas component) and Rs.1500 crore (Gas component) totaling to Rs.1900.00 crore.

Chapter – II

Outcome Budget 2016-17

An amount of Rs.79,883.57 crore has been approved as the outlay for the year 2016-17 for the plan schemes as per details given below: -

Annual Plan 2016-17

(Rs. in crore)

SL. No.	ORGANISATION/ SCHEMES	INTERNAL RESOURCES	BONDS/ DEBENTURES	ECB/ SUPPLIER CREDIT	OTHERS	TOTAL (IEBR)	TOTAL (GBS) ⁸ +	TOTAL PLAN OUTLAY
1	2	4	5	6	7	8	9	10
A.	PSUs Including GBS to CPSEs							
1	NTPC	10210.08	14202.12	5587.80	0.00	30000.00	0.00	30000.00
2	NHPC	1792.51	1798.21	0.00	0.00	3590.72	367.00	3957.72
3	PGCIL	5500.00	14000.00	2500.00	500.00	22500.00	0.00	22500.00
4	D.V.C.	0.00	1600.00	0.00	1702.57	3302.57	0.00	3302.57
5	THDC	705.49	0.00	441.88	252.00	1399.37	40.00	1439.37
6	SJVNL	600.00	0.00	0.00	400.00	1000.00	0.00	1000.00
7	NEEPCO	169.53	407.26	79.12	235.00	890.91	166.13	1057.04
8	PFC		5000.00			5000.00	0.00	5000.00
	TOTAL (A)	18977.61	37007.59	8608.80	3089.57	67683.57	573.13	68256.70
Note : The GBS indicated included in column 9 is categorized as a Scheme of Assistance to CPSEs and has been shown along with IEBR to reflect estimated total capital outlay from CPSEs For the purpose of budgeting the GBS is reflected under Scheme of Assistance to CPSEs								
B	Statutory Authorities							
1	CEA	0.00	0.00	0.00	0.00	0.00	10.00	10.00
2	Forum of Regulators	0.00	0.00	0.00	0.00	0.00	1.00	1.00
	TOTAL (B)		0.00	0.00	0.00	0.00	11.00	11.00
C.	Research & Training							
(i)	CPRI	0.00	0.00	0.00	0.00	0.00	125.00	125.00
(ii)	NPTI	0.00	0.00	0.00	0.00	0.00	33.00	33.00
	TOTAL (C)		0.00	0.00	0.00	0.00	158.00	158.00
D	Deen Dayal Upadhyaya Gram Jyoti Yojana	0.00	0.00	0.00	0.00	0.00	3000.00	3000.00
E	Integrated Power Development Scheme	0.00	0.00	0.00	0.00	0.00	5500.00	5500.00
F	Conservation and Energy Efficiency							

(i)	Bureau of Energy Efficiency	0.00	0.00	0.00	0.00	0.00	64.00	64.00
(ii).	Energy Conservation	0.00	0.00	0.00	0.00	0.00	100.00	100.00
	TOTAL (F)		0.00	0.00	0.00	0.00	164.00	164.00
G	Strengthening of Power Systems							
(i)	Smart Grid	0.00	0.00	0.00	0.00	0.00	30.00	30.00
(ii)	Green Energy Corridor	0.00	0.00	0.00	0.00	0.00	0.10	0.10
(iii)	Interest Subsidy to National Electricity Fund	0.00	0.00	0.00	0.00	0.00	25.00	25.00
(iv)	Financial Support for Debt re-structuring of DISCOMS	0.00	0.00	0.00	0.00	0.00	0.01	0.01
(v)	Power System Operation Company (POSOCO)	0.00	0.00	0.00	0.00	0.00	81.21	81.21
(vi)	220 KV Transmission Line from Srinagar to Leh via Kargil	0.00	0.00	0.00	0.00	0.00	250.00	250.00
(vii)	Power system Improvement in North Eastern States excluding Arunachal Pradesh and Sikkim	0.00	0.00	0.00	0.00	0.00	234.00	234.00
(viii)	Strengthening of Transmission Systems in the States of Arunachal Pradesh and Sikkim	0.00	0.00	0.00	0.00	0.00	273.00	273.00
ix)	Funds for Evaluation Studies and Consultancy		0.00	0.00	0.00	0.00	0.01	0.01
(x)	Comprehensive Award Scheme for Power Sector	0.00	0.00	0.00	0.00	0.00	0.54	0.54
	TOTAL (G)		0.00	0.00	0.00	0.00	893.87	893.87
H	Power System Development Fund (PSDF) (Both Gas and Non Gas component)	0.00	0.00	0.00	0.00	0.00	1900.00	1900.00
	GRAND TOTAL [A to H]	18977.61	32007.59	8608.80	3089.57	67683.57	12200.00	79883.57

Non Plan Assistance 2016-17**(Rs. in crore)**

Sl. No.	ORGANISATION/SCHEMES	NON PLAN BUDGET
1	MOP Secretariat	35.57
2	Central Electricity Authority	90.04
3	CERC Fund	55.50
4	CERC Fund	-55.50
5	NPTI (Pension Fund)	7.40
6	Appellate Tribunal for Electricity	10.97
7	Setting up of Joint SERC for UTs & Goa except Delhi (Grant Lump-sum Provision)	6.81
8	Badarpur Thermal Power Station – Revenue Exp.	0.10
9	Capital Support to DVC	0.10
	Total	150.99

The outcomes for each of the above schemes in detail have been given in the table annexed serially to this chapter. Briefly, the position is as under:-

i. PLAN SCHEMES 2016-17**A. PUBLIC SECTOR UNDERTAKINGS (including GBS under Assistance to CPSEs)****(i) NTPC Limited**

The outlay of Rs 30,000 crores during 2016-17 is expected to result in commissioning of 3788 MW i.e. 250 MW from Bongaigaon, 800 MW from Kudgi, 660 MW from Mouda-II, 660 MW from Solapur, 250 MW from Anantpur Solar, 8 MW from Singrauli small hydro, 500 MW from Nabinagar TPP (Joint Venure with Indian Railways) and 660 MW from Meja (Joint Venture with UPRVNL). The outlay will also result in substantial physical progress of the projects scheduled to be commissioned in the XII / XIII plan period. The details are at **Annexure-I**.

(ii) NHPC Limited

The outlay of Rs.3957.72 crore (consisting of Rs.367 crore as GBS and Rs.3590.72 crore as IEBR) is kept for activities planned during 2016-17 and includes claims/residual works of projects already commissioned namely Dulhasti, Uri-II, Parbati-III, TLDP-III, Chamera-III, Chutak and Nimoo Bazgo HE Projects. Construction activities of ongoing projects viz., Teesta Low Dam-IV, Kishanganga HEP which are in full swing now. However, due to ongoing protests by various pressure groups in Assam against the construction of Subansiri Lower HE Project, there is total stoppage of works since Dec'2011. Earlier, there was total slow progress of works in Parbati-II due to geological surprises during excavation by TBM in shear Zone. The works on new projects like Kotli

Bhel-IA, Teesta-IV, Dibang and Tawang-I & II Projects are also expected to start in the year 2016-17 subject to availability of pending statutory clearances and Govt. sanction afterwards.

The details are at **Annexure-II**.

(iii) Power Grid Corporation of India Limited (PGCIL)

For the outlay of Rs. 22,500 crore (IEBR) of POWERGRID, during the year 2016-17 the quantifiable deliverables of 10,500 circuit km stringing and 60 Nos. transformer erections have been targeted. PGCIL is not provided any budgetary support under the Schemes of Ministry of Power. The details are at **Annexure-III**.

(iv) Damodar Valley Corporation (DVC)

The outlay of Rs.3302.57 crore during 2016-17 is expected to result in commencement of commercial operation of BTPS–A (1x 500 MW). DVC has taken-up roof top Solar Project at DVC Towers for 53 KWp. The details are at **Annexure-IV**. No Plan assistance in the form of GBS is provided to DVC.

(v) THDC India Limited

For the year 2016-17, the outlay of Rs.1439.37 crore has been made (including Rs.40 crores as GBS). Provision of has been made for execution of various balance works (Road works, Diversion tunnel, substation and internal Project roads etc.) of Koteshwar HEP Project, Tehri PSP (1000MW) Project, Vishnugad pipalkoti HEP (444MW), for mobilization advance, Machinery advance to contractor and other miscellaneous works of Dhukwa SHP (24MW) and for the New Projects.

The details are at Annexure-V.

(vi) SJVN Limited

For the year 2016-17, the outlay is Rs. 1000.00 crores comprising domestic borrowings of Rs. 400.00 crores & internal resources of Rs. 600.00 crores. This is mainly for (i) balance payments for civil works and payments for electro mechanical and hydro mechanical works of Rampur HEP (412 MW) and pre-construction activities of (ii) Luhri HEP– Stage-I (219 MW), Stage-II and Stage-III (iii) Devsari HEP (252 MW) (iv) Jakhol Sankri HEP (51 MW) (v) Naitwar Mori HEP (60 MW) (vi) Dhaulasidh HEP (66 MW), for equity contribution in JVs/subsidiaries ((vii)Arun – III HEP, Nepal (900 MW), (viii) Wangchhu HEP (570 MW), (ix) Kholongchhu HEP (600 MW), (x) Buxar Thermal Power Project (1320 MW), (xi) Deocha Pachami Coal Block) (xii) Doimukh HEP (80 MW) (xiii) New Wind Power Projects (xiv) Solar Power Projects (xv) Arun-III Transmission Line (xvi) Construction of Office Building at Shimla and New Delhi and (xvii) Research and Development against which funds have been proposed out of the above outlay. No budgetary support is being provided under the Schemes of Ministry of Power.

The details are at **Annexure-VI**.

(vii) North Eastern Electric Power Corporation (NEEPCO)

For the year 2016-17, an outlay of Rs 890.91 crore excluding GBS of Rs 166.13 crore has been kept for NEEPCO. Major portion of this proposed outlay is for construction of the ongoing projects viz. Kameng HEP (600 MW), Pare HEP (110 MW), Tuirial HEP (60 MW), balance payment in respect of activities of Tripura Gas Based Project (101 MW), Agartala Gas Turbine Plant – CC Extension Project (51 MW) and Solar Project (5 MW) at TGBP site. The total GBS support of Rs.166.13 crore is for Kameng HEP.

The details are at **Annexure-VII**.

B. Statutory Authorities

- (i) **Central Electricity Authority** – There is an outlay of Rs.10.00 crore in Plan and Rs.90.04 crore under Non-Plan in the Financial Year 2016-17. The Central Electricity Authority coordinates the activities of the various agencies in relation to control and utilization of national power resources. It is also responsible for carrying out the survey and studies, collection and recording of data concerning generation, distribution, utilization and development of power resources. The details are at **Annexure-VIII**.
- (ii) **Forum of Regulator (FOR)**– There is an outlay of Rs.1.00 crore for the FY 2016-17 for the Scheme for the purpose of capacity building by way of training / re-orientation of personnel of Regulatory Commission and availing consultancy. The details are at **Annexure-IX**.

C. Research & Training

(i) Central Power Research Institute (CPRI):

Central Power Research Institute (CPRI) is a National Level Laboratory for applied research in the field of power engineering and functions as an independent authority for testing, evaluation and certification of electrical equipment and components. The plan outlay for CPRI is Rs.125.00 crore for the FY 2016-17. The details are at **Annexure X**.

- (ii) **National Power Training Institute (NPTI)** : An amount of Rs.33.00 crore has been provided under Plan Scheme for the FY 2016-17. The details are at **Annexure XI**.

D. Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY):

Government of India has approved “Deendayal Upadhyaya Gram Jyoti Yojana” (DDUGJY) vide OM dated 3rd Dec’ 2014. The erstwhile Rajiv Gandhi Grammen Viduyutikaran Yojana (RGGVY) has been subsumed under this new Scheme as a Rural Electrification Component.

The DDUGJY has the following components:-

- (i) Separation of agriculture and non-agriculture feeders facilitating judicious rostering of supply to agricultural & non-agricultural consumers in the rural areas; and
- (ii) Strengthening and Augmentation of Sub Transmission & Distribution infrastructure in rural areas, including metering of Distribution Transformers/feeders/consumers and
- (iii) Rural electrification for completion of the targets laid down under the erstwhile RGGVY for 12th and 13th Plans.

Under the scheme, 60% of the Project cost is being extended by Govt. of India as Grant in respect of States other than special category (85% for the Special Category States i.e. all North Eastern States including Sikkim, J&K, Himachal Pradesh, Uttarakhand). Minimum 10% (5% for Special Category States) shall be contributed through own sources by the State Govt./State Power Utility and the balance 30% (10% for Special Category States) may be arranged through Loan or own sources by the State Govt./State Power Utility. Additional grant upto 15% (5% in case of Special Category States) by conversion of 50% of loan component will be provided by Govt. of India on achievement of prescribed milestones such as timely completion, reduction in AT&C losses & upfront release of revenue subsidy by State Govt.

The proposed budgetary allocation is Rs.3000 crore for the FY 2016-17. The target for FY 2016-17 is to achieve electrification of 30000 villages (including 8360 UEV) and offering electricity to 14 lakh BPL households. The details are at **Annexure-XII**.

E. Integrated Power Development Scheme (IPDS) :

IPDS became operational with CCEA approving it on 20th November, 2014, Integrated Power Development Scheme (IPDS), the new scheme will have the following components:-

- (i) Strengthening of sub-transmission and distribution networks 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 for completion of the targets laid down under erstwhile R-APDRP for 12th and 13th Plans.

The erstwhile scheme of R-APDRP has got subsumed into IPDS alongwith its outlay. Projects worth Rs. 24,205 crore have been sanctioned by the Monitoring committee (including in-principle sanction of Rs.19,071 crore).

The financial target for the Financial Year 2016-17 are as under:

(Rs. in crore)

S. N.	Name of Schemes	Amount allocated in FY 2016-17
1	IPDS Grant	2918.72
2	IPDS Loan	2581.28
	Total	5500.00

The details are at **Annexure-XIII**.

F. CONSERVATION AND ENERGY EFFICIENCY

- (i) **Bureau of Energy Efficiency:** The Plan Outlay for BEE for 2016-17 is Rs.64.00 crore (including Rs.0.71 crore as EAP component). To promote energy efficiency during the XII Plan period and to achieve the target of reducing energy consumption, BEE has initiated several programmes/schemes viz. House hold lighting, Commercial Buildings,

Standards & Labeling of appliances, Demand Side Management in Agriculture/ Municipalities, SMEs and Large Industries and Capacity Building of SDAs. The details are at **Annexure XIV**.

- (ii) **Energy Conservation** - The Plan Outlay for Energy Conservation for 2016-17 is Rs.100.00 crore. The funds would be utilized for carrying out the Energy Conservation related activities i.e. National Level Awareness Campaign, National Energy Conservation Awards and National Level Painting Competition for Children. National Action Plan on Climate Change contains 8 National Missions representing multi-project, long term and integrated strategies for achieving key goals in the context of climate change. One of the Missions is National Mission for Enhanced Energy Efficiency (NMEEE), which is being pursued by MOP through Bureau of Energy Efficiency (BEE). Performance Achieve and Trade Mechanism (PAT), 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 details are at **Annexure-XV**.

G. Strengthening of Power Systems

(i) Smart Grid

Government has approved the establishment of a National Smart Grid Mission (NSGM) in Power Sector to plan and monitor implementation of policies and programmes related to Smart Grid activities in India. The total outlay for NSGM activities for 12th Plan is Rs 980 crore with a budgetary support of Rs 338 crore. An outlay of Rs.30.00 crore has been kept for 2016-17.

The major activities envisaged under NSGM are key policy guidelines and initiatives for facilitating smooth and rapid adoption and implementation of Smart Grid technologies, development of smart grid, development of microgrids, consumer engagements and training & capacity building etc. NSGM entails implementation of a smart electrical grid based on state-of-the art technology in the fields of automation, communication and IT systems that can monitor and control power flows from points of generation to points of consumption (sometimes even down to the appliances level). The details are at **Annexure XVI**.

(ii) Green Energy Corridor

The scheme is for maximization of renewable energy generation and integration with the main grid without compromising on the security and stability of power system. A token provision of Rs.0.10 crore has been kept for 2016-17 to meet the part of expenditure of setting up Renewable Energy Management Centre (REMC). The details of the scheme may be seen at **Annexure – XVII**.

- (iii) **Interest Subsidy to National Electricity Fund** - Government of India has approved

setting up of National Electricity Fund (Interest Subsidy Scheme) to provide interest subsidy aggregating to Rs.8,466 crore on loan disbursements against the distribution projects amounting to Rs. 25,000 crore approved during FY 2012-13 & 2013-14 to the State Power Utilities both in public and private sector, to improve the distribution network.

NEF, Steering Committee during FY 2012-13 & FY 2013-14 has approved proposals of 14 states (25 Discoms) for coverage under NEF. During FY 2014-15, based on the compliance of the eligibility parameters as per NEF guidelines, eligible Discoms will be eligible for availing the benefit of interest subsidy for the disbursement taken from the lenders. The Plan Outlay for 2016-17 is Rs.25.00 crore. The details are at **Annexure XVIII**.

(iv) Financial Support for Debt Restructuring of DISCOMs

The Scheme for Financial Restructuring of State Owned Discoms was notified by Ministry of Power after CCEA's approval with effect from 05-10-2012. The Scheme was available to all participating State Owned Discoms having accumulated losses and facing difficulty in financing operational losses. There is an outlay of Rs.0.01 crore during the Financial Year 2016-17. Participating States can avail the benefits under the Scheme upon achieving certain milestones envisaged under the scheme. As the states have not been forthcoming to avail the benefit under the scheme only a token provision of Rs.0.01 crore has been kept. The details are at **Annexure-XIX**.

(v) Power System Operation Company (POSOCO) - Government approved conversion of POSOCO (currently a 100 % subsidiary of PGCIL) into a standalone independent Government Company. In the process, an institutional framework for an independent, secure and reliable power system operation at the national level has been put in place, as mandated under the Electricity Act, 2003. POSOCO operates the National Load Despatch Centre (NLDC) and Regional Load Despatch Centres (RLDCs) which are also responsible for operating/regulating the country wide vibrant electricity market. POSOCO is also the nodal agency for Renewable Energy Certificate (REC) mechanism, transmission pricing, short term open access, deviation settlement mechanism, Power System Development Fund (PSDF) etc. A provision of Rs.81.21 crore has been provided during 2016-17 for the purpose of acquiring the shares currently held by PGCIL in POSOCO for the activities given at **Annexure-XX**.

(vi) 220 KV transmission line from Srinagar to Leh via Kargil. To improve power supply in the Leh-Kargil region and connect the Ladakh Region to the National Grid, the Government is constructing a transmission system from Srinagar to Leh. This would ensure year-round availability of power to Ladakh region. A Plan outlay of Rs. 250.00 crore is kept for FY 2016-17 for construction of 220 kV transmission line from Srinagar to Leh via Kargil and will be released to Power Grid Corporation of India Limited, implementation agency of this project. The project cost is being borne by Government of India and the Government of Jammu & Kashmir in the ratio of 95:5.

(vii) Power System Improvement Project in NE Region (excluding Sikkim & Arunachal

Pradesh) : The project is conceived for the development of intra-State Transmission and Distribution network in the six States of Assam, Manipur, Meghalaya, Mizoram, Tripura and Nagaland and is being implemented by Power Grid Corporation of India Limited (PGCIL), being a Central Transmission Utility of the country under Central Sector Plan scheme of Ministry of Power. A Plan outlay of Rs. 234.00 crore is kept for FY 2016-17 for construction of Power System Improvement Project in NE Region.

The scheme is to be implemented with Government of India budgetary support and external funding (World Bank loan) on 50:50 basis except for capacity building component for which entire funding is to be made by GoI. Implementation of this project will create a reliable power grid and improve its connectivity to the upcoming load centres, and thus extend the benefits of the grid connected power to all the consumers. This will also lead to increase in per capita power consumption in these States and contribute to the economic development of the NER.

(viii) **Strengthening of transmission system in the States of Arunachal Pradesh and Sikkim** :

The scheme is conceived for strengthening of Intra-State transmission and distribution system for Arunachal Pradesh and Sikkim. The scheme is being implemented by Power Grid Corporation of India Limited (PGCIL), being a Central Transmission Utility of the country, under central sector Plan scheme of Ministry of Power. A Plan outlay of Rs. 273.00 crore is kept for FY 2016-17 for construction of transmission system in the States of Arunachal Pradesh and Sikkim:

The details of the above schemes at para (vi) to (viii) under Transmission Schemes are at **Annexure-XXI**.

(ix) **Funds for Evaluation Studies** – A token provision of Rs.0.01 crore has been kept for the scheme for 2016-17. The details are at **Annexure-XXII**.

(x) **Comprehensive Award Scheme** - A provision of Rs.0.54 crore has been kept for the scheme for 2016-17. The details are at **Annexure-XXIII**.

(H) **Power System Development Fund (PSDF)** : A Plan Outlay of Rs.1900.00 crore for 2016-17 has been kept for PSDF. PSDF is to be utilized for funding of proposals related to safe operation of Grid like installation of protection system, renovation and modernisation (R&M) of transmission and distribution system for relieving congestion etc. The details are at **Annexure-XXIV**.

(I) **NON-PLAN SCHEMES 2016-17**

(i) **MOP Secretariat** – A provision of Rs.35.57 crore has been kept for the scheme for 2016-17. The details are at **Annexure-XXV**.

- (ii) **Central Electricity Authority** – A provision of Rs.90.00 crore has been kept under Non-Plan for the scheme for 2016-17. The details are at **Annexure-VIII**.
- (iii) **CERC Fund** – A provision of Rs.55.50 crore has been made for CERC fund under Non-Plan. The scheme is a positive-negative entry having no net cash effect on the MOP Budget. The details are at **Annexure-XXVI**.
- (iv) **NPTI (Pension Fund)** – A provision of Rs.7.40 crore has been kept under Non-Plan for the scheme for 2016-17. The details are at **Annexure-XI**.
- (v) **Appellate Tribunal for Electricity** - A provision of Rs.10.97 crore has been kept for the scheme for 2016-17. The details are at **Annexure-XXVII**.
- (vi) **Setting up of Joint JERC for UTs & Goa (Grant Lump-sum provision)** – A provision of Rs.6.81 crore has been kept under Non-Plan for the scheme for 2016-17. The details are at **Annexure-XXVIII**.

OUTCOME BUDGET 2016-17
NTPC Limited

Sl. No.	Name of Scheme / Programme/ Project	Objective/ Outcome	Outlay 2016-17			Quantifiable Deliverables/ Physical Milestones	Projected Outcomes	Processes /Timelines	Remarks / Ant.
1	2	3	4(i)	4(ii)	4(iii)	5	6	7	8
			Non-Plan Budget	Plan Budget	Complementary Extra Budgetary Resources				
i	Ongoing Projects								
1	Barh-I, Bihar	Addition of 1980 MW of generation Capacity			1435.99	U#1 Boiler Light Up	Addition of 1980 MW of generation Capacity	Dec'16	
2	Tapovan- Vishnugad, Uttarakhand	Addition of 520 MW of generation capacity			470.81	Completion of 1st Turbine erection	Addition of 520 MW of generation capacity	Mar'17	
3	Bongaigaon, Assam	Addition of 750 MW of generation capacity			636.01	U#2 TG Box up	Addition of 750 MW of generation Capacity	Jun'16	
						U#2 Commissioning		Oct'16	
4	Kudgi, Karnataka	Addition of 2400 MW of generation capacity			2592.17	U#2 Boiler Light Up	Addition of 2400 MW of generation Capacity	Sep'16	
						U#2 TG Box Up		Sep'16	
						U#2 Commissioning		Dec'16	
5	Mauda II, Maharashtra	Addition of 1320 MW of generation capacity			858.17	U#3 Commissioning	Addition of 1320 MW of generation Capacity	May'16	

6	Solapur , Maharashtra	Addition of 1320 MW of generation capacity				1224.83	U#1 Boiler Light Up	Addition of 1320 MW of generation Capacity	Aug'16	
							U#2 Boiler Light Up		Feb'17	
							U#2 TG Box Up		Apr'16	
							U#1 Commissioning		Feb'17	
7	Lata Tapovan, Uttarakhand	Addition of 171 MW of generation capacity				33.10	-	Addition of 171 MW of generation Capacity	-	
8	Lara , Chattisgarh	Addition of 1600 MW of generation capacity				2040.19	U#1 Boiler Light Up	Addition of 1600 MW of generation Capacity	Jun'16	
							U#2 Commencement of TG Erection		May'16	
9	Gadarwara, MP	Addition of 1600 MW of generation capacity				1873.19	U#2 Boiler Hydraulic Test	Addition of 1600 MW of generation Capacity	Sep'16	
							U#1 Boiler Light Up		Oct'16	
10	Unchahar-IV, UP	Addition of 500 MW of generation capacity				779.80	U#6 Boiler Hydraulic Test	Addition of 500 MW of generation Capacity	Jun'16	
							U#6 Boiler Light Up		Sep'16	
							U#6 TG Box Up		Sep'16	
11	North Karanpura, Jharkhand	Addition of 1980 MW of generation capacity				1688.45	U#3 Commencement of Boiler Erection	Addition of 1980 MW of generation Capacity	Aug'16	
							U#1 Boiler Hydraulic Test		Jan'17	

													Jul'16		
													Jan'17		
12	Darlipalli, Orissa	Addition of 1600 MW of generation capacity				2100.94				U#1 Commencement of TG Erection	Addition of 1600 MW of generation Capacity		Jun'16		
										U#1 Boiler Hydro Test			Oct'16		
										U#2 Commencement of TG Erection			Dec'16		
13	Tanda-II, UP	Addition of 1320 MW of generation capacity				1164.61				U#6 Commencement of Boiler Erection	Addition of 1320 MW of generation Capacity		May'16		
										U#5 Commencement of TG erection			Jan'17		
14	Rammam, West Bengal	Addition of 120MW of generation capacity				241.66				Commencement of HRT excavation from Adit#2	Addition of 120 MW of generation Capacity		Apr'16		
15	Khargone, MP	Addition of 1320 MW of generation capacity				1346.93				Commencement of Boiler erection Unit#1	Addition of 1320 MW of generation Capacity		Sep'16		
										Commencement of Boiler erection Unit#2			Mar'17		
16	Singrauli Small hydro, UP	Addition of 8 MW of generation Capacity				12.66					Addition of 8 MW of generation Capacity				
17	Anatpur Solar PV	Addition of 250 MW of generation Capacity				701.38				Commissioning of 200 MW	Addition of 250 MW of generation Capacity		Apr'16		
										Commissioning of 50 MW			Oct'16		

	Subtotal (i) Ongoing Projects		0.00	19200.89	0.00								
ii	New Projects												
1	Barethi, MP	Addition of 2640 MW of generation capacity		50.00		-			Addition of 2640 MW of generation Capacity		-		
2	Bilhour, UP	Addition of 1320 MW of generation capacity		10.00		-			Addition of 1320 MW of generation Capacity		-		
3	Telangana-I, Telangana	Addition of 1600 MW of generation capacity		10.00		-			Addition of 1600 MW of generation Capacity		-		
4	Pudimadaka, AP	Addition of 4000 MW of generation capacity		50.00		-			Addition of 4000 MW of generation Capacity		-		
5	Katwa, West Bengal	Addition of 1320 MW of generation capacity		10.00		-			Addition of 1320 MW of generation Capacity		-		
6	Talcher TPS-III, Odisha	Addition of 1320 MW of generation capacity		2.00		-			Addition of 1320 MW of generation Capacity		-		
7	Other New Projects			319.17									
8	Other New Renewables			3648.61		-					-		
	Subtotal (ii) New Projects		0.00	4099.78									
iii	Coal Mining			1665.00		-					-		
iv	Renovation and Modernisation			643.65		-					-		
v	Other Miscellaneous Schemes			4390.68		-					-		
	Grand Total z (i. to v)		0.00	30000.00									

OUTCOME BUDGET 2016-17
NHPC Limited

Sl. No.	Name of Schemes / programmes / Projects	Objective/ Outcome	Annual Plan 2016-17 Proposed		Quantifiable deliverables / Physical Output	Targets	Projected Outcomes	Process/ Timelines	Remarks/ Risk factors
			Sub Debt	IEBR					
1	2	3	4	5	6	7	8	9	10
A	Commissioned Schemes								
1	Chamera-III	Addition of 231 MW Capacity		6.93	6.93	Payment of liabilities and balance minor works.	Commissioned in Jun'2012	Mar'17	Payment of liabilities and balance minor works in progress
2	Chutak	Addition of 44 MW Capacity	171.39	(145.84)	25.55	Payment of liabilities and balance minor works.	Commissioned in Jan'2013	Mar'17	
3	Teeesta Low Dam Project-III	Addition of 132 MW Capacity		43.86	43.86	Payment of liabilities and balance minor works.	Commissioned in Mar' 2013	Mar'17	
4	Nimoo Bazgo	Addition of 45 MW capacity	195.61	(184.30)	11.31	Payment of liabilities and balance minor works.	Commissioned in Oct' 2013	Mar'17	
5	Uri-II	Addition of 240MW capacity		78.95	78.95	Payment of liabilities and balance minor works.	Commissioned in Feb'14	Mar'17	
6	Parbati H. E. Project stage -III	Addition of 520 MW capacity		85.53	85.53	Payment of liabilities and balance minor works.	Commissioned in May'14	Mar'17	
B	Scheme Under Construction								
1	Teeesta Low Dam Project-IV	Addition of 160MW capacity		147.28	147.28	Boxing of Unit-III	Anticipated Project Completion September'2016	May'16	Subject to normal local area condition
						Boxing of Unit-IV		Sept'16	
						Commissioning of Unit-III		June'16	
						Commissioning of Unit-IV		Sept'16	

2	Subansiri Lower H. E. Project	Addition of 2000 MW capacity	1000.00	1000.00	Dam Excavation & Concreting	70000 m ³ & 350000 m ³	Anticipated Project Completion shall be assessed after resumption of work.	Mar-17	Subject to the resumption of construction activities of Subansiri Lower Project, in full swing, from Apr'16 and award of balance civil works (Lot SSL6) before resolution of impasse.
					Under ground excavation work	50000 m ³		Mar-17	
					Concrete lining in HRT & other Hydraulic Tunnels	30000 m ³		Mar-17	
					Drilling for grouting	2500 RM		Mar-17	
					Excavation & Concreting in Power House Structure	30000 m ³ & 10000 m ³		Mar-17	
3	Kishanganga HE Project	Addition of 330 MW capacity	613.03	613.03	Boxing up of Unit - I	100%	Anticipated Project Completion November 2016	Jul'16	
					Boxing up of Unit - II	100%		Sept'16	
					Boxing up of Unit - III	100%		Oct'16	
					Commissioning of One unit	100%		Nov'16	
4	Parbati-II HE Project	Addition of 800 MW capacity	744.91	744.91	Hydro-mechanical Works in Dam Structure (erection of Radial & stop log Gates)	100%	Anticipated Project Completion, Dec-18	May, '16	
					Completion of Excavation in Pancha feeder Tunnel	507m		Mar, '17	
					Completion of Concreting in Jiwa Feeder Tunnel	3472m		Feb, '17	

C.	New Schemes								Assembly of Stator , Rotor & lowering in Unit-4	100%		Aug, '16	
1	Kotli Bhel Stage-1A	Addition of 195 MW capacity	0.00	33.00	33.00				Release of Mobilization & Equipment Advance (Lot-I Civil Works)	70.00 crs	Anticipated project completion date 48 months after CCEA approval.	Jul-16	Achievement of targets in respect of these activities are subject to clearance of Project from Hon'ble Supreme Court and Final Forest clearance & Subsequent Land Transfer in Favour of NHPC accordingly.
									Diversion Tunnel Excavation(Cum)	62570 cum		Dec-16	
									Diversion Tunnel Concreting(Cum)	10440 cum		Mar-17	
									Dam Surface Excavation(Cum)	382200 cum		Mar-17	
									Main Access Tunnel to Power House Excavation	117140 cum		Mar-17	
									Main Access Tunnel to Power House Concreting	16590 cum		Mar-17	
									Power House Excavation (Cum)	117968 cum		Mar-17	
2	Kotli Bhel Stage- I B	Addition of 320 MW capacity	0.00	1.49	1.49				Nominal amount kept for Establishment & Ancillary works.	100%	-	Mar'17	Nominal amount kept for Establishment & Ancillary works.
3	Kotli Bhel Stage- II	Addition of 530 MW capacity	0.00									Mar'17	

4	Dibang	Addition of 3000 MW capacity	0.00	95.00	95.00	Acquisition of Colony land	98.38 Ha		Nov-16	Provision for Hydraulic Model Studies and acquisition of colony land at pathar camp, Right bank road from Dambuk to Pathar Camp. development of colony land, construction of Right bank road and colony roads is subject to PIB and CCEA clearance of the Project.
						Acquisition of land for road from Dam Site to Dambuk	52.80 Ha	Project Road	May-16	
						Construction of right bank road from Dam Site to Dambuk	24.00 KM	Project Road	Mar-17	
						Development of Land (like fencing of Chimiri Project Colony / Area etc.)	51.38 Ha	Developed land with fencing	Mar-17	
						Construction of Colony Roads at Chimiri and Pathar Camp	4.00 KM	Roads in the Chimiri Colony	Mar-17	
5	Teesta-IV	Addition of 520 MW capacity	0.00	90.00	90.00	Deposition of Cost of NPV, compensatory afforestation and CAT	100%	Achievement is subject to successful Gram Sabha under Forest Right Act. and CCEA clearance	Jun-16	Subject to compliance under Forest Rights Act, 2006 PIB & CCEA clearances of the project.
						Diversion of Forest land for project components	100%		Dec-16	

										100%	Land acquisition for project components(Private land)							Dec-16	Subject to passing of new Land Acquisition Act by State Govt. and commencement of related activities for award of compensation after PIB & CCEA clearances of the project..
										100%	Approach roads for various sites and Project colony							Feb-17	
										75%	Hiring of consultant for Township planning of Project at Thimching							Dec-16	
6	Tawang- I				0.00	43.88	43.88	43.88	43.88	330m	Drifting of Surge Shaft Bottom Drift							17 months	Subject to availability of land & resolution of resistance by villagers of Yusum
										13 Km	Teli road strengthening							8 months	Subject to availability of land & resolution of resistance by villagers of Yusum
										240 Ha	Land acquisition for the Project components							2 months	Subject to Forest Clearance, PIB & CCEA approvals.
										100%	NPV and Compensatory afforestation							August '16	
7	Tawang-II				0.00	44.27	44.27	44.27	44.27	100%	Drilling for Goodman jack test							Jun-16	Subject to availability of access to the site & resolving of resistance by local Lamas & Villagers
										100%	Hydrofracturing test by CSMRS								
										100%	Constructions and strengthening BRO road to Power House							Mar-17	Subject to handing over of road by BRO

	D.	S&I and Other Schemes						Land acquisition for the Project components	62 Ha	All these activities are subjected to final notification by GoAP and handing over of land.	June'16	These activities are subjected to compliance of FRA Act 2006 by district Authority & handing over of land to NHPC & PIB/CCEA approvals of GOI.
1		Bursar	Addition of 1020 MW capacity	0.00	33.63	33.63		Hydrological & Metrological data collection, Explo. Drilling & Drifting for S&I etc.	Mar-17	Drilling - 1000 M, Drifting - 400 M, Hyd.& Metrol. Data Studies & installation of hyd. Instruments - Rs.27.00 Lacs	Mar-17	The Drilling work as well as the Drifting work is under progress at various locations of Dam site and Power House site. The Project area is located in entirely remote and isolated area which has remained militancy infested for a long time. The area is not connected by Road network. The J&K Armed Police personnel have been deployed for providing security cover for various works.
								Hiring of land on lease basis during survey & investigation activities of Project	Mar-17	Land to be taken on lease for Stores/Expl. Magazines/ Buildings etc.	Mar-17	
								Temporary const. for Site Accommodation etc.	Mar-17	Temp. Buildings (400 sq. M) at Site - Rs. 80.00 Lacs	Mar-17	
								Upgradation, Construction & strengthening of roads for various sites & Project Components	Mar-17	temp. Suspension bridge & Access paths in work sites - 109.00 Lacs	Mar-17	

1	Bhutan JV/ Chamkharchhu-I (770 MW)		0	45.00	45.00	Provision for NHPC Equity contribution in the JV company.		March'17	After JV formation obtaining clearances.
G	Wind, Solar Power Projects (NHPC Own)								
1	Wind Power Project (132 MW)	Addition of 132MW capacity	0	200.00	200.00	Provision for advance/bills towards finalisation of 50 MW Wind Farm through EPC contract. Also provision kept for Consultant payments for 82 MW wind Farm proposed in Kerala.		March'17	Subject to implementation of 82 MW project in Kerala
2	Solar Power Project (50 MW)	Addition of 50 MW capacity	0	90.00	90.00	Payment for successful bidders as advance/Payment against works (running bills).		March'17	Subject to signing of PPA & commencement of work
H	JV PROJECTS- SOLAR & THERMAL(Equity)								
H a)	Thermal								
1	Pirpainti Project (1320 MW)- Equity investment in JV between NHPC(74%) and Bihar State Power Generation Company Limited(BSPGCL-26%)		0	100.00	100.00	Provision for NHPC Equity contribution in the JV company.		March'17	Subject to PIB/CCEA approval from GOI
H b)	Solar								
1	Equity investment in JV between NHPC and UPNEDA (50 MW)		0	52.00	52.00	Provision for NHPC Equity contribution in the JV company.		March'17	Award and commencement of Major work under JVC

2	Equity investment in JV between NHPC, NEEPCO and GOAP for execution of Siang upper Stage-I (6000 MW) & Siang Upper Stage- II (3750 MW)	0	0.00	0.00	0.00	Provision for NHPC Equity contribution in the JV company.	Equity investment in JV	March '17	MOP informed NHPC that in view of the decision taken in the meeting held on 20.10.2015 in the office of National Security Advisor (NSA) to "plan and implement a multipurpose river valley project on Siang River, which will provide energy, water and flood security along with the livelihood opportunities for the local population", works on Siang Upper Stage-I and Stage-II Projects be put on hold until a final decision is taken in the matter.
J	R&M Works		61.35	61.35	61.35				
J	R&D Works and CDM		0.34	0.34	0.34				
	Total	367.00	3590.72	3957.72					

OUTCOME BUDGET 2016-17
Power Grid Corporation of India Limited

(Rs. in crore)

S.No	Name of the Projects/Scheme/ Programme	Annual Plan (BE 2016-17) IEBR	Quantifiable Deliverables FINAL		"Objective/ Outcomes"	Process/ Timelines	Remarks
			Stringing (CKM)	Transformer Erection (No.)			
1	2	3	4	5	6	7	8
	A. ONGOING SCHEMES						
1	Ne - Nr/Nw Interconnector - I	370	114		Power Evacuation/ Inter-regional	Dec-16	Kameng HEP ant. By Dec-16
2	Tr. System For Development Of Pooling Station In Northern Region Of West Bengal And Transfer Of Power From Bhutan To Nr/Wr	1090	135	6	Power Evacuation/ Inter-regional	Dec-16	Punantsangchu HEP delayed. Works slowed down to the extent possible to match generation.
3	Augmentation Of Transformers In Northern Region - Part-B.	110		5	System strengthening	Sep-16	
4	Bus Reactors In Northern Region (Phase-II)	40			System strengthening	Mar-17	Outlay kept for preliminary/ infrastructural works
5	Northern Region System Strengthening Scheme - Xxvii	5			System strengthening	Jun-16	Project likely to be completed in Jun-16. Outlays kept for balance work
6	Northern Region System Strengthening Scheme -Xxv	75	70		System strengthening	Sep-16	Outlays kept for balance work
7	Trans. System Associated With Pallatana Gas Based Power Project And Bongaigaon Thermal Power Station (Btps)	150	358		Power Evacuation	Dec-16	
8	North Eastern Region Strengthening Scheme -ii (Part-A)	10		2	System strengthening	Mar-17	Outlay kept for preliminary/ infrastructural works
9	North Eastern Region Strengthening Scheme -ii (Part-B)	5			System strengthening	Mar-17	Outlays kept for balance work
10	North Eastern Region Strengthening Scheme -iii	55			System strengthening	Mar-17	Outlay kept for preliminary/ infrastructural works
11	North Eastern Region Strengthening Scheme -iv	45			System strengthening	Mar-17	Outlay kept for preliminary/ infrastructural works
12	Radial Interconnection Between India (Ner) And Bangladesh - India Portion	5			System strengthening	Mar-17	Project completed in Jan- 16. Outlays kept for balance payments

13	Installation Of Transformer & Procurement Of Spare Converter Transformer At Bhadrawati HvdC B/B Stn.	85					System strengthening	Sep-16	Outlays kept for balance HVDC spare Transformer supply
14	Inter-Regional System Strengthening Scheme In Wr And Nr (Part-A)	70					System strengthening	Mar-17	Project completed in Sep-15. Outlays kept for balance payments.
15	System Strengthening - Xvii In Southern Regional Grid	40					System strengthening		Project completed in Dec-15. Outlays kept for final payments
16	System Strengthening In North/ West Part Of Wr For Ipp Proj. In Chhattisgarh. Part - E	150	300	2			System strengthening	SEP'16	Outlays kept for balance work
17	System Strengthening In Raipur - Wardha Corridor For Ipp Project In Chhattisgarh - Part - 6	150	430				System strengthening	JUN'16	Outlays kept for balance work
18	Transmission System Associated With Mauda Stage-II (2X660mw) Gen. Proj.	265	550	2			Power Evacuation	Sep-16	
19	Transmission System Associated With Mundra Ultra Mega Power Proj.	95	520				Power Evacuation	Dec-16	Outlays kept for balance work
20	Transmission System Strengthening In Western Part Of Wr For Ipp Generation Projects In Chhattisgarh - Part-D	45	344				Power Evacuation	JUN'16	Outlays kept for balance work
21	Wardha - Hyderabad 765 Kv Links	1800	550				System strengthening	MAR'17	Efforts being made to complete Wardha-Nizamabad portion in FY 2016-17.
22	Western Region Strengthening Scheme - V	5	142				System strengthening	JUN'16	Outlays kept for balance work
23	Installation Of Statcon In Wr	500					System strengthening	Mar-17	Outlay kept for preliminary/ infrastructural works /Supply.
24	Northern Region System Strengthening Scheme -Xxxii	245	539	3			System strengthening	JUN'16	Outlays kept for balance work
25	Northern Region System Strengthening Scheme -Xxxiv	60	15				System strengthening	MAR'17	Outlays kept for Supply/ Erection & Stringing works
26	Northern Regional System Strengthening Scheme - Xvi	25	90				System strengthening	JUN'16	Outlays kept for balance work
27	Northern Regional System Strengthening Scheme - Xxiv	40	178				System strengthening	JUN'16	Outlays kept for balance work

28	Provision Of 400Kv Bays For Line Under Northern Region System Strengthening Scheme - Xxxi-B	35							System strengthening- TBCB assoc. bays	MAR'17	Outlay kept for preliminary/ infrastructural works /Supply.
29	Static Var Compensators (Svcs) In Northern Region	200							System strengthening	MAR'17	Outlay kept for preliminary/ infrastructural works /Supply.
30	Strengthening Scheme In Northern Region	15							System strengthening	MAR'17	Project completed in Dec-15. Outlays kept for balance payment
31	Trans. System Strengthening In Wr - Nr Transmission Corridor For Ipp's In Chaittisgarh	1600							System strengthening	MAR'17	Outlay kept for preliminary/ infrastructural works /Supply.
32	Transmission System Associated With Kishanganga Hep	70	88						Power Evacuation	MAR'17	Outlay kept for preliminary/ infrastructural works /Supply.
33	Transmission System For Phase-I Generation Projects In Orissa- Part- C.	5							Power Evacuation	MAR'17	Project completed in Aug-15. Outlays kept for balance payment.
34	Wr - Nr HvdC Interconnector For Ipp Projects In Chattisgarh	795	983			8			Power Evacuation	MAR'17	Outlays kept for balance work
35	Statcom At Nr	5							System strengthening	MAR'17	Outlay kept for preliminary/ infrastructural works /Supply.
36	Provision Of Spare 765Kv Icts In Nr	10							System strengthening	MAR'17	Outlay kept for preliminary/ infrastructural works /Supply.
37	Northern Region System Strengthening Scheme -Xxix	15							System strengthening	MAR'17	Outlay kept for preliminary/ infrastructural works /Supply.
38	Ts Associated With Sholapur-Ii Ntpc	40							Power Evacuation	MAR'17	Outlays kept for preliminary/ infrastructural works /Supply.
39	Installation Of Bus Reactor & Ict In Western Region	165				5			System strengthening	JUL'16	Outlays kept for balance work
40	System Strengthening Common For Western Region And Northern Region (Line Bays & Reactor Provision).	15							System strengthening	MAR'17	Project completed in Aug-15. Outlays kept for balance payments
41	Transmission System Associated With Lara Stps - I Gen. Proj. Ntpc	160	200						Power Evacuation	MAR'17	
42	Common System Associated With East Coast Energy Pvt. Ltd And Ncc Power Projects Ltd. Ltoa Gen. Proj. In Srikakulam Area - Part - B	800	720						Power Evacuation	Sep-16	
43	Transmission System For Phase-I Generation Projects In Jharkhand And West Bengal - Part - A2.	90							Power Evacuation	Mar-17	Project likely to be completed in Mar-16. Outlays kept for final payments
44	Eastern Region Strengthening Scheme - Iii	65	42						System strengthening	Mar-17	

45	Eastern Region Strengthening Scheme - Viii	5							System strengthening	Jun-16	Outlays kept for balance work
46	Common Tr. System Associated With East Coast & Ncc Power Projects In Srikakulam Area Part-A	90	402						Power Evacuation	AUG'16	Outlays kept for balance work
47	Common System Associated With East Coast Energy Pvt. Ltd And Ncc Power Proj. Ltd. Ltoa Gen. Proj. In Srikakulam Area - Part-C	40				2			Power Evacuation	AUG'16	
48	Establishment Of Pooling Station At Champa And Raigarh (Near Tamnar) For Ipp Gen. Proj. In Chhatishgth - B	60				2			Power Evacuation	JUN'16	
49	Split Bus Arrangement For Various Sub Stations In Eastern Region	5							Power Evacuation	Mar-17	Outlays kept for balance work
50	Transmission System For Transfer Of Power From Generation Project In Sikkim To Nr/Wr Part - A.	20							Power Evacuation	Mar-17	Project likely to be completed in Mar-16. Outlays kept for balance payment.
51	Eastern Region Strengthening Scheme - Xiii	20							System strengthening	Nov-16	Outlays kept for balance work
52	Eastern Region Strengthening Scheme-Ix	90				2			System strengthening	JUN'16	
53	Eastern Region Strengthening Scheme-Xii	190				7			System strengthening	NOV'16	
54	Eastern Region Strengthening Scheme-V	300	911			2			System strengthening	JUN'16	
55	System Strengthening In Sr - Xiii & Xxii & Ict At Vemagiri	100	122			1			System strengthening	MAR'17	
56	System Strengthening In Sr - Xx	240				5			System strengthening	FEB'17	
57	Trans. System For Connectivity For Ncc Power Project Ltd	25							Power Evacuation	Mar-17	Project likely to be completed in Mar-16. Outlays kept for balance work
58	Transmission System For Ultra Mega Solar Park In Anantpur District, Andhara Pradesh - Part-A (Phase-I)	90	21			3			Power Evacuation	MAY'16	
59	Provision For Line Bays For Connectivity Lines For Maheswaram (Hyderabad) 765/400Kv Gis Pooling Station	15							Power Evacuation	Mar-17	Outlay kept for preliminary/infrastructural works /Supply.
60	Sub Station Works Associated With Hyderabad (Maheshwaram) Pooling Station	100	7						Power Evacuation	MAR'17	

61	System Strengthening -Xxiii Of Sr Grid	60					System strengthening	Mar-17	Outlay kept for preliminary/ infrastructural works /Supply.
62	Transmission System For Connectivity Of Essar Power Gujarat Limited.	10					Power Evacuation	Mar-17	Project likely to be completed in Mar-16. Outlays kept for balance work
63	Creation Of 400/220Kv S/Stn. In Nct Of Delhi During 12Th Plan Period (Part-A)	30	30				Power Evacuation	Mar-17	Outlay kept for preliminary/ infrastructural works /Supply.
64	Creation Of 400/220Kv S/Stn. In Nct Of Delhi During 12Th Plan Period (Part-B1)	25					Power Evacuation	Mar-17	Outlay kept for preliminary/ infrastructural works /Supply.
65	Trans System Ass With Rapp 7&8 Part-B	25	37				Power Evacuation	MAR'17	Outlay kept for preliminary/ infrastructural works /Supply.
66	Provision Of Statcom In Nr	10					System strengthening	Mar-17	Outlay kept for preliminary works .
67	Green Energy Corridors-Ists-Part-A	260	264				Power Evacuation	MAR'17	Outlay kept for preliminary/ infrastructural works /Supply.
68	Northern Region System Strengthening Scheme - Xix	10					System strengthening	Mar-17	Outlays kept for final payments
69	Northern Region System Strengthening Scheme - Xviii	20	205	1			System strengthening	JUN'16	Outlays kept for balance work
70	Northern Region System Strengthening Scheme - Xxviii	55					System strengthening	Jun-16	Project likely to be completed in Mar-16. Outlays kept for balance work
71	Northern Region System Strengthening Scheme -Xxx & Xxi	115	656				System strengthening	JUN'16	Outlays kept for balance work
72	Northern Region Transmission Strengthening Scheme	5					System strengthening	Mar-17	All elements completed in Jun-14 except LILO at Saharanpur under review for delation at CEA. Outlays kept for balance payment.
73	Transmission System Associated With Rapp 7 & 8 - Part-A.	35	90				Power Evacuation	DEC'16	Outlays kept for balance work
74	Transmission System Associated With Tehri Pump Storage Plant (Psp) & Meja Tps	185	10				Power Evacuation	MAR'17	Outlay kept for preliminary/ infrastructural works /Supply.
75	Transmission System For Phase-I Generation Projects In Jharkhand And West Bengal - Part - B.	175	136	2			System strengthening	JUN'16	Outlays kept for balance work
76	Phase-I Generation Projects In Jharkhand & West Bengal (Part A1)	25	134				Power Evacuation	JUN'16	Outlays kept for balance work

77	NrSS-Xxvi	5						System strengthening	MAR'17	Project completed in May-15. Outlays kept for balance payment.
78	Transmission System Associated With Kakrapar App - 3&4	105	308					Power Evacuation	OCT'16	
79	Green Energy Corridors:- Inter State Transmission Scheme (lists) - Part - B	765	30					Power Evacuation	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
80	Inter-Regional System Strengthening Scheme In Wr And Nr (Part-B)	2045	205					System strengthening	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
81	Common System Associated With Costal Energen Private Ltd And Ind-Barath Power Ltd. (Ltoa) Gen. Proj. In Tuticorin Area Part - B	260	564					Power Evacuation	Sep-16	Outlays kept for balance work
82	Sub Station Extn. Works Associated With Trans. System Required For Evacuation Of Power From Kudgi Tps (3X800 Mw -Ph-I) Of Ntpc	70						Power Evacuation	MAR'17	Project likely to be completed in Mar-16. Outlays kept for balance payments.
83	Common Transmission Scheme Associated With Isgs Projects In Nagapattinum/ Cuddalore Area Of Tamil Nadu - Part-A1 (B)	30						Power Evacuation	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
84	System Strengthening - Xii Of Sr	20						System strengthening	MAR'17	Outlays kept for balance work
85	System Strengthening In Sr - Xiv	20						System strengthening	Jun-16	Outlays kept for balance work
86	System Strengthening In Southern Region - Xxiii	80						System strengthening	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
87	Trans System For Kudankulam App - 1&2	85						Power Evacuation	MAR'17	Outlays kept for balance work
88	Transmission System For Phase-I Generation Projects In Jharkhand And West Bengal - Part - A1.	25						Power Evacuation	MAR'17	Project likely to be completed in Mar-16. Outlays kept for balance payments.
89	Sub Station Extn. Works Associated With Eastern Region Strengthening Scheme -Vii	65						System strengthening	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
90	Sub Station Extn. Works Associated With Eastern Region Strengthening Scheme -Vi	20						System strengthening	MAR'17	

91	Sub Station Extn. For Transmission System Associated With Vindhyachal - V Project Of Ntpc (Part-A)	65				Power Evacuation	Mar-17	Outlay kept for preliminary/infrastructural works /Supply of TBCB Line.
92	Green Energy Corridors: Transmission Scheme For Renewable Generation Projects- Part C	280				Power Evacuation	Mar-17	Outlay kept for preliminary/infrastructural works /Supply.
93	Sub-Station Works Associated With System Strengthening In Sr For Import Of Power From Er	1125				System strengthening	Mar-17	Outlay kept for preliminary/infrastructural works /Supply.
94	Transmission System For Transfer Of Power From Generation Project In Sikkim To Nr/Wr Part - B.	50				Power Evacuation	Mar-17	Project likely to be completed in Mar-16. Outlays kept for balance payments.
	B. New Schemes							
1	Nabinagar - II	135				Power Evacuation	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
2	Substation At Ut Chandigarh	10				System strengthening	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
3	Green Energy Corridors-Istis-Part-D	250				Power Evacuation	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
4	Northern Regional System Strengthening Scheme - Xxxix	5				System strengthening	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
5	Tr. Sys. Stren., Tran. Of Power From Mangdechu Hep In Bhutan	80				Power Evacuation	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
6	Erss-Xiv	90				System strengthening	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
7	Erss-Xv- Aug. Of Exs. Berhampore	180				System strengthening	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
8	Erss-Xvii	45				System strengthening	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
9	Transmission System Associated With Gadarwara Stps (2X800mw) Of Ntpc Ltd. - Part B	15				Power Evacuation	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
10	Hvdc Bipole Link Between Western Region And Southern Region	2540				System strengthening	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
11	Transimison System Associated With Darlipalli Tps	70				Power Evacuation	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
12	Er Strengthening-Xi	145				System strengthening	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.

13	Transmission System Ph-II In Odisha (Dpr-I)	25				System strengthening	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
14	Ers-xxvi	10				System strengthening	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
15	Transmission System Ph-II In Odisha (Dpr-II)	5				System strengthening	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
16	Srs- xxiv (Kadapa Gis & Others)	580				System strengthening	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
17	System Strengthening Sr1 (Xxi) Installation Of Statoms	190				System strengthening	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
18	Tr. System For Ultra Mega Solar Park In Anantapur Dist., Ap (Phase-I)	65				Power Evacuation	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
19	Tr. System For Ultra Mega Solar Park In Anantapur Dist., Ap (Phase-II)	20				Power Evacuation	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
20	Bays For Ts Associated With Dgen Power	20				Power Evacuation	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
21	System Strengthening Associated With Mundra Umpp-Part-A	75				Power Evacuation	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
22	System Strengthening For Ips In Chhattisgarh & Other Generation Projects In Wr	5				Power Evacuation	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
23	Transmission System For Ultra Mega Solar Park (750Mw) In Rewa District, Mp	100				Power Evacuation	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
24	Nrss-xxxviii	15				System strengthening	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
25	Nrss-xxxvi	5				System strengthening	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
26	Nrss-xxxvii	35				System strengthening	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
27	Interconnecting Line From North Karanpura Stpp To Chandwa & Gaya	70				Power Evacuation	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
28	Tr-201503-Nlc-Karaikal 230Kv D/C Line	25				System strengthening	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
29	Kudankulam 3&4	20				Power Evacuation	MAR'17	Outlay kept for preliminary/infrastructural works /Supply.
	Tbcb Equity	500						
	Total	22500	10500	60				

OUTCOME BUDGET 2016-17 DAMODAR VALLEY CORPORATION

(Rs. in crore)

Sl. No.	Name of Scheme/ Project	Objective/Outcome	B.E. 2016-17			Quantifiable Deliverables /Physical Outputs	Projected Outcomes	Processes / Time-lines	Remarks/Risk Factor
			Non-Plan Budget	Plan Budget (Rs. Cr.)	Complementary Extra budgetary Resources				
1	2	3	4 (i)	4 (ii)	4 (iii)	5	6	7	8
A.	A1]DVC's own Thermal Power Projects								
1	Chandrapura TPS Extn. Unit# 7 & 8 (2x 250 MW)	Capacity addition of 500 MW			25.74	To complete balance works in EPC & Non-EPC work viz. Weir work, Misc. Civil & enabling works including extn. of Railway track and diversion of Ash slurry pipe lines, initial spares, Service tax payments, SIP, work under contingency, CTFS hospital development etc. including contract closing.	Completion of balance work and contract closing.	03/2017	
2	Mejia TPS Unit# 7&8 (2x 500 MW)	Capacity addition of 1000 MW			455.53	To complete balance works in EPC & Non-EPC work viz. Rail infrastructure (incl. doubling of captive line etc.) installation of new wagon tippler, Extension of Ash pond with additional land procurement, colony development etc. and contract closing of balance packages.	Completion of balance EPC works, part completion of balance Non EPC works and contract closing of balance packages.	03/2017	
3	Koderma Stage-I:U# 1 & 2 (2x500 MW)	Capacity addition of 1000 MW			395.61	Unit # 1: Completion of balance EPC works.	Completion of balance EPC works and part completion of balance non-EPC activities, contract closing of balance packages.	03/2017	
						Unit # 2: Completion of balance EPC works.		03/2017	
						Part completion of balance work of Non EPC (Payment towards balance land acquisition+ railway infra+new jobs such as construction of wagon tippler, Pipradih- Koderma rail linkage+Township + R&R)		03/2017	

									contract closing of Main Plant, PWS, CHP and other packages.		03/2017	
4	Durgapur Steel TPS U# 1&2 (2x500 MW)	Capacity addition of 1000 MW					176.70		Unit # 1&2 : Completion of balance EPC works.	Completion of balance EPC works and part completion of balance non-EPC activities, contract closing of various packages.	03/2017	
									Part completion of balance activities of Non EPC (Payment towards balance land + Township + Greenbelt development +R&R)		03/2017	
									contract closing of Main Plant, PWS and other packages.		03/2017	
5	Raghunathpur TPS Ph-I: Unit# 1&2 (2x 600 MW)	Capacity addition of 1200 MW					663.04		Installation & Commissioning of additional (3 Nos.) Skid mounted pumps.	To complete the balance work necessary for sustained generation from the units.	06/2015	
									Permanent intake well-completion of Caission-floating, anchoring and bottom plugging.		09/2016	
									Permanent intake well-start of construction of Intake pump house.		01/2017	
									Part completion of Rail-infrastructure.		03/2017	
6	Bokaro 'A' TPS: (1x 500 MW)	Capacity addition of 500 MW during 12th plan					401.89		Crusher house of main CHP-Civil & structural work start.	Commercial Operation declaration and completion of other activities.	04/2016	
									Readiness of PT Plant.		05/2016	
									Interconnecting conveyor route between BTPS B to BTPS A		06/2016	
									COD		06/2016	
									Part readiness (50%) of Civil & Structural works of Track Hopper.		10/2016	

									Start of equipment erection of stacker reclaimer			02/2017	
									Start of equipment erection in TPS and Galleries.			03/2017	
7	Raghunathpur TPS Ph-II: Unit# 1&2 (2x 660 MW)	Capacity addition of 1320 MW during 12th plan					518.94		****	****	****		NTPS agreed to relocate the material / equipment of Ph-II to its Katwa Project. DVC is in discussion with NTPC.
8	Investigation / Feas. Studies / DPR etc. for future projects, if any.	Preliminary Study/ DPR /Reports, if any along with development of Coal block, Dams & Canals and LT Distribution					5.00		Fund has been kept for pre-project activities of new projects, if any incl. KTPS Ph II and others.	Fund provision for preliminary study of new projects, if proposed.		03/2017	
	Total: A :						2642.45						
B.	Maithon RBTPS: Unit # 1 & 2 (2 X 525 MW) - Equity to MPL	Capacity addition of 1050 MW					0.00						
	Total: B :						0.00						
C.	Renewable Energy Projects: Solar Power Projects.	Capacity addition of 15 MW through Renewable Energy					0.00						
	Total: C :						0.00						
D.	T & D schemes												
	TSC Schemes:	T & D					498.55		Please Refer to Appendix-T&D-3				
	R&A of T&D								Please Refer to Appendix-T&D-3				
	Total T & D schemes	To facilitate T&D of power					498.55						
E.	Communication schemes						2.40						
	1) Power Line Carrier Communication (PLCC)	Establishment of Speech , data communication and carrier projection in i)132 KV Dhanbad- Patherdih sub-station line, ii) 400KVRaghunathpur-Ranchi(PG) line, iii) 132KV CTPS - BSL sub-station line, iv) 220 KV Koderma-Giridih line.					2.01			Speech, datacommunication and protection of high tension line.		03/2017	Erection & Commissioning to match with T&D progress.

	2] Very High frequency communication (VHF)	Obtaining frequency clearance for up-comparing stations.			0.00	Procurement, erection & commissioning	Speech communication.	03/2017	Procedural delay.
	3] Unified Load Despatch & Communication scheme (ULDC)	Upgradation of existing SCADA/EMS system.			0.08	****	****	****	****
	4] MPLS - VPN Network connectivity	****			0.00	****	****	****	****
	5] Leased line for new Power House	****			0.00	****	****	****	****
	6] OPGW for Transmission lines/ UGFO for Sub stations	****			0.00	****	****	****	****
	7] Establishment of Carrier Protection where Indoor PLCC equipment have already been replaced	Carrier Protection of 220 KV D/C Waria-Bidhanagar (WB-SETCL) line and implementation of Carrier Protection schemes using M1 and M2 Distance Protection Relay in already commissioned 220KVDouble circuit CTPS B-Dhanbad line , CTPS B-BTPS B line , Dhanbad-Pithakari line , Ramgarh-BTPS B line , MTPS-Durgapur line , Kalyaneswari -Pithakari line, Dhanbad-Electrosteel line, Dhanbad-Giridih line, Kalyaneswari-Burnpur line, MTPS-Burnpur line, MTPS-Barjora line.			0.31	Procurement.	Protection of High Tension Line.	03/2017	Procedural delay.
F.	R&M Schemes				38.53				
	PHS U-1 (Phase -IV)	RLA Consultancy & Refurb.							
	MHS U- 1&3 (Phase -IV)	RLA Consultancy & Refurb.							
	MHS U-2 (Phase -IV)	RLA Consultancy & Refurb.							
	Others (Phase – II & III) (CTPS & DTPS)	Improved performance							
	Consultancy & Expert fees (Phase-IV)	RLA Consultancy & Refurb.							
	Sub Total R&M :				38.53				
G.	Pollution:	For Environmental compliance			1.77	Dry Ash disposal sys. For BTPS B requirement for various works relating to environmental compliance.	Pollution norms compliance.	03/2017	

H.	Misc. Spill Over Works											
	[1] Mejia TPS U#1,2,3 & 4 (4x 210 MW), U# 5 & 6 (2x 250 MW)									16.06	For procurement of initial spares and other balance work	03/2017
I.	Refurbishment/Extension/Improvement	To improve performance of Generating units with improved infrastructural transmission & distribution network.								95.73		03/2017
J.	R&D Centre	To serve the requirement of DVC power stations and Transmission & Distribution system								1.00		
K.	SLDC scheme	Establishment of main SLDC at DVC Howrah substation.								1.06	Commissioning and completion of residual work like installation of the fire fighting equipments etc.	03/2017
L.	Equity participation BPSCL	Equity contribution to BPSCL								0.00		
	Equity participation NHPTL									0.00		
M.	Equity participation: MAMC	Equity contribution to MAMC								2.00		
N.	Equity participation: DVTDPPL	Equity contribution to DVTDPPL								0.00		
O.	Captive Coal Mine : Khagra Joydev Proj.									3.01		
	Grand Total in Rs. Cr. : A to O									3302.56		

Appendix - T&D3

(Rs. in crore)

Sl No.	Name of Scheme/ programme	Objective/Outcome	Annual Plan 2016-17 (proposed)	Quantifiable Deliverable	Process/ Timelines	Remarks
		3	4	5	6	7
1	Main Works of T & D	To facilitate T&D of power	498.55	1) 220 KV MTPS-KLNS S/C LILO at Bumpur-2nd alignment 2) 132 KV BIADA S/S with bays at CTPS and associated lines 3) 220 KV D/C Gola - Ranchi line 4) 220 KV DSTPS S/Y and interconnecting lines 5) 220 KV Gola S/S 6) 220/132/33 KV Mejia B S/S and interconnecting lines 7) 220/132 KV Burdwan S/S (GIS) and interconnecting lines		Work stopped due to contractual issues Completed Completion target July 2016 Contractual completion target Feb. 2017 NIT floated. Tender not yet finalised Pre tendering stage Pre tendering stage
				Projects at initiation level		
				1) 132 KV Dhanbad-Govindpur line (to be charged at 33KV) 2) 132 KV 2nd LILO at Jamuria with bays 3) 220/33 KV Raghunathpur S/S and interconnecting lines 4) 220/33 KV Panagarh S/S and interconnecting lines 5) 132/33KV Mugma S/S and interconnecting lines		NIT floated. Tender not yet finalised Completion by Nov' 2016 Land identified Land identified Land identified. Sanction under process
				Continuation of oldworks, supposed to be completed by 03/2014		
				1) 400KV D/C RTPS-Ranchi (PG) 2) 220 KV D/C MTPS-Gola-Ramgarh 3) 220KV D/C Koderma-Giridih		Completion by March' 2016 Completion by June' 2016 Completed
2	R & D of T&D	R&A of projects within scheduled the frame		Misc. R&A work at different S/S & Transmission lines		In different stage of progress
	Grand Total		498.55			

OUTCOME BUDGET 2016-17 THDC LIMITED

(Rs. in crore)

Sl. No.	Name of Schemes/ Programme	Objective/ Outcome	Outlay 2016-17			Quantifiable Deliverables/ Physical Outputs	Processes/ Timelines	Projected Outcomes	Remarks/ Risk Factors
			Non Plan Budget	Plan Budget	Complimentary Extra Budgetary Resources (IEBR)				
1	2	3	4 (i)	4 (ii)	4 (iii)	5	6	7	8
1	KOTESHWAR HEP (4X100)	Hydro Power Generation	0.00	0.00	52.04			Generating Hydro Power	Project already commissioned. Amount kept for balance essential works.
2	VISHNUGAD PIPALKOTI HEP (4X111MW)	Hydro Power Generation	0.00	40.00 (Equity)	339.73	Assembly & Commissioning of Tunnel Boring Machine	Oct'16	Acheivement of targets will facilitate timely completion of Project	
						Excavation upto GIS Floor Level EL. (1062.5m to 1048m)	Jan'16		
						Complete Crown Slashing of DC-1 in full 16m width	July'16		
						Complete Crown Slashing of DC-2 in full 16m width.	Dec'16		
3	TEHRI PSP (1000 MW)	Hydro Power Generation	0.00	0.00	844.24	Excavation of gallery unit-8	Jun'16		
						Overt Concrete Lining in TRT -4 U/S of EA7	Jun'16		
						Power House, Machine Hall Service Bay Area- Erection of EOT Crane 2	Jun'16		
						Penstock Assembly Chamber (PAC)- Bench-1 Excavation	Jul'16		
						Power House, Machine Hall Unit Area- Benching Up to EL 575 Generator Barrel FL	Oct'16		
						Bus bar galleries (Lower)- Concreting in gallery unit-8 (34 M)	Sept'16		
						Downstream Surge Shaft- Shaft Widening TRT-3	Feb'17		
4	DHUKWAN HEP (3X8MW)	Hydro Power Generation	0.00		53.12	Head Race Channel- Complete Excavation and partial filling (Common & Rock) of HRC.	March'17		

5	NEW PROJECTS	Hydro Power Generation	0.00	0.00	9.60	Various studies to facilitate S&I works, DPR preparation/TEC, stage-II activities	March'17	Achievement of targets will facilitate timely completion required FR/ DPR	"Project lies out side the protected area of Askot Musk Deer Park Sanctuary and accordingly GoJK agreed on 12.08.2014 to withdraw their proposal seeking approval of NBWL for carrying out S&I work. Depends on GoJK decision on integrated development of Dhauli ganga Basin through JV of THDCIL and GOJK."
	i) Bokang Bailing (330MW)						March'17		"Projects affected due to Hon'ble Supreme Court. Order 13th aug-13 directives MoEF & State of Ultrakhand not to grant any EC & FC for any new hydroelectric projects in the state of Ultrakhand until further orders. The Completion of work depends on Supreme court order."
	ii) Malari Jhelam (65MW)						-		
	iii) Jhelam Tamak (108 MW)						-		
	iv) Malishej Ghat PSS (700MW)						March'17		Letter of commitment has been issued by GoMH on 04.02.16. Signing of Implementation agreement is awaited with Govt. of Maharashtra.
	v) Humbari PSS (400 MW)						March'17		"Depends on commitment by GoMH"
	vi) Khurja STPP (2X660 MW)	Thermal Power Generation	0.00	0.00	100.36	Land acquisition, rerouting of national High way	March'17	Land acquisition shall be completed with in time.	PIB has recommended for approval of investment towards Pre-investment activities (Like land acquisition, rerouting of national High way etc.) in its meeting held on 28.08.15.
	vii) Wind/Solar Power	Wind/Solar Power Generation	0.00	0.00	0.28	Commissioning of 50 MW wind Patan Power Plant	Oct'16	50 MW wind Power shall be commissioned in time.	"Wind Power :-EPC Contract for Patan wind farm site, Gujarat with its comprehensive Operation & Maintenance for 20 years has been awarded to M/s Gamesa Renewable Pvt. Ltd, Chennai on 30.10.15. Solar Power-A tripartite agreement amongst SECI, Kerala State electricity Board and THDCIL has been signed on 31.03.15 for development of 50 MW Solar project in Distt. Kasaragod, Kerala. THDCIL had released the initial payment of Rs. 7.165Cr. to SECI. Action for possession of required land from Kerala Govt. is in Progress. Solar Energy Corporation of India is in Process of finalisation of bid document for award of work."
	Total New Projects				110.24				
	TOTAL OUTLAY = Rs 1439.37 Cr		40*		1399.37				

*This GBS of Rs 40 Cr is excluding of Rs 2.92 Cr assistance from MINRE (Ministry of New & Renewable Energy) for Dhukwan SHP

OUTCOME BUDGET 2016-17 SJVN LIMITED

(Rs. in crore)

Sl. No.	Name of Scheme / Programme	Objective / Outcome	Outlay 2016-17			Quantifiable Deliverables/Physical Outcomes	Projected Outcomes	Process/ Timelines	Remarks
			Non Plan Budget	Plan Budget	Complementary Extra-Budgetary Resources				
1	Rampur Hydro Electric Project(412 MW)	Balance works of RHEP			135.28	Closing of the Contracts, Electro Mechanical Works, HM Works	Balance payments of Major Civil Works, Electro Mechanical Works, HM Works,R&R, Environment and Ecology related works of 412 MW of Rampur HEP	Running payments upto March, 2017	
					19.72	R&R-Cost of private land required to be acquired, payments for various R&R schemes, compensation in view of likely damages to private property due to blasting, P/F internal E.I. in non-residential buildings, implementation of CAT Plan.			
		Sub-Total			155.00				
2	Luhri Hydro Electric Project (701 MW)	Construction of LHEP			7.81	"Hydraulic Model studies, Drilling and Drifting for Stage-II and Stage-III "	Investigation studies and getting various clearances.	Running payments upto March, 2017	
					18.19	IEDC		Continuous process	
		Sub-Total			26.00				
3	Dhulasidh HEP (66 MW)	Construction of DSHEP			0.36	Consultancy for detailed design stage	Consultancy for detailed design stage, commencement of pre-construction activities	Running payments upto March, 2017	

								IEDC					Continuous process	
		Sub-Total		5.00										
4	Devsari HEP (252 MW)	Construction of DHEP		42.50				Acquisition of private land	Acquisition of private land, leasing of private land, commencement of pre-construction activities.				Running payments upto March, 2017	
								Investigation works and Miscellaneous consultancies including Model studies, Seismic studies and Dynamic studies etc.					Running payments upto March, 2017	
								IEDC					Continuous process	
		Sub-Total		53.00										
								Diversion of forest land	Diversion of forest land, commencement of pre-construction activities.				Running payments upto March, 2017	
								Mobilization advance and commencement of Civil works					Running payments upto March, 2017	
								Construction of approach road, construction of abutments for bridges					Running payments upto March, 2017	
								IEDC					Continuous process	
		Sub-Total		21.00										
6	Jakhol Sankari HEP (51MW)	Construction of JSHEP		0.16				Survey & Investigation work	Survey and Investigation Works and commencement of pre-construction activities.				Running payments upto March, 2017	
								IEDC					Continuous process	
		Sub-Total		1.00										
7	Arun-III HEP (900 MW)	Construction of Arun-III HEP		20.00				Acquisition of land and commencement of Pre-construction activities and Establishment expenses	Acquisition of land, commencement of pre-construction activities.				Running payments upto March, 2017	

8	Wangchhu HEP (570 MW)	Sub-Total Construction of Wangchhu HEP		20.00			Survey and Investigation works, acquisition of land, Construction of approach roads to various project components, preparation of EIA and EMP reports and getting requisite clearances	Formation of JV for commencement of pre-construction activities.	Running payments upto March, 2017
				6.00					
				3.00			IEDC		Continuous process
		Sub Total		9.00					
9	Kholongchhu HEP (600 MW)	Construction of Kholongchhu HEP		19.00			Pre-construction activities (equity contribution) and IEDC	Commencement of pre-construction activities.	Running payments upto March, 2017
		Sub-Total		19.00					
10	Buxar Thermal Power Project (1320 MW)	Construction of Buxar Thermal Power Project		174.79			Completion of EIA/ EMP studies.	Completion of EIA/ EMP studies, and commencement of pre-construction activities.	30.09.16
							Update of DPR for main plant.		30.09.16
							Preparation of DPR for Rail Infrastructure.		30.09.16
				25.21			IEDC		Continuous process
		Sub-Total		200.00					
11	Deocha Pachami Coal Block	Development of Deocha Pachami Coal Block		20.00			Infusion of equity of SJVN in JV Company for development of coal block.	Development of coal block	Running payments upto March, 2017
		Sub-Total		20.00					
12	Wind Farm Projects	Setting up of Wind Farm		70.00			Balance Payments for Khirvire Wind Power Project and Award of New Wind Power Projects	Balance Payments for Khirvire Wind Power Project and Award of New Wind Power Projects	Running payments upto March, 2017
		Sub-Total		70.00					

13	Doimukh HEP (80 MW)	Construction of Doimukh HEP			2.00	Preparation of Detailed Project Report including site investigation and surveys	Surey and investigation works and submission of Detailed Project Report and EIA/EMP report	Running payments upto March, 2017	
						IEDC			
		Sub-Total			2.00				
14	Solar Power Projects	Equity contribution and development of Solar Power Project			333.00	5 MW Charanka Solar Power Project(Gujarat) and development of new solar power projects.	Commissioning of 5 MW Charanka Solar Power Project and development of new solar power projects	Running payments upto March, 2017	
		Sub-Total			333.00				
15	Arun-III Transmission Line	Construction of Arun-III transmission line			5.00	Survey and investigation works	Construction of the transmission line	Running payments upto March, 2017	
		Sub-Total			5.00				
16	Construction of Office Building at Shimla & New Delhi	Construction works			60.00	Construction of Office Building at Shimla & New Delhi	Construction of Office Building at Shimla & New Delhi	Running payments upto March, 2017	
		Sub-Total			60.00				
17	R&D	R&D			1.00	R&D activities	R&D activities	Running payments upto March, 2017	
		Sub-Total			1.00				
		Total			1000.00				

OUTCOME BUDGET 2016-17
NEEPCO LTD.

(Rs. in crore)

Sl. No.	Name of the Scheme / Programmes	Objective / Outcome	"Outlay BE 2016-17"			Quantifiable Deliverables/ Physical outputs	Projected Outcome	Process / Timelines	Remarks/ Risk Factors
			4 (i) Non-Plan Budget	4(ii) Plan Budget	4 (iii) Complementary Extra-Budgetary Resources				
1	2	3	4 (i)	4(ii)	4 (iii)	5	6	7	8
1	Kameng HEP (600 MW), Arunachal Pradesh	Generation of Hydro Power	0.00	166.13	219.27	Commissioning of the Project	--	December'16	Construction activities are going on in full swing.
						Overt Lining HRT Face-II - Target=2415 m	--	August' 16	Work is in progress.
						Bichom Dam Concreting (Target total quantity (cumulative) = 362908 Cum)	--	November' 16	Work is in progress.
						Package-I:	--		
						Overt Lining at HRT Face III (Target=3000 m)	--	August' 16	Work is in progress.
						Concreting of Tenga Dam (Balance Target= 6000 cum against total quantity of 97086.3cum) including finishing works	--	November'16	Work is in progress.
						Package-III:	--		
						HRT Lining, Face VII (Cumulative=2577 m, Invert lining)	--	September'16	Work to start after completion of overlining.
						Completion of Valve House including roofing	--	April'16	
						Power House & Tail Race Channel:	--		

										Barrel Concreting Unit - 4	--	May'16	
										Completion of concreting works of Tail race channel	--	July'16	
										High Pressure Tunnel/ Penstock:	--		
										Concreting of penstock including anchor blocks	--	August'16	
										Plugging of adits including cleaning of tunnel (after completion of invert lining and grouting) (Common to package -I, II & III)	--	October'16	
										Package-IV	--		
										Completion of steel Lining of HPT	--	June'16	
										Erection and commissioning of spillway radial gate at Bichom and Tenga dams		November'16	
										Erection and commissioning of spillway stoplog gate at Bichom and Tenga dams		November'16	
										Package-V :	--		
										Stator and rotor assembly and lowering	--	August'16	
										Erection og governing system, static excitation system and IPB	--	July'16	...
										Erection of MIV	--	September'16	...
										Erection of E/M equipment at elevation 228.0 metres between D & E lines	--	September'16	...
										Erection of draft tube gate including second stage embedded parts	--	June'16	
										Erection of E/M equipment between A & B lines	--	June'16	...
										Precommissioning checks	--	December'16	
										Package-VI:	--		
										Erection and Commissioning of 400 kV switchyard	--	November'16	
										Erection and Commissioning of 132 kV switchyard		November'16	
										Project Commissioning			
										River impounding and tunnel filling		November'16	

2	Pare HEP (110 MW), Arunachal Pradesh	Generation of Hydro Power	0.00	0.00	34.40	Commissioning of Generating units (Unit- I to IV)	--	December'16	Construction activities are going on in full swing.
						Commissioning of the Project	--	May'2016	
						Package-I			
						Dam			
						Concreting in Blocks(up to EL-248 m)		Feb'16	
						Downstream works i/c plunge pool		April'16	
						Concreting of breast wall, control room & finishing works		May'16	
						Power House			
						Architectural works		April'16	
						Tail Race Channel			
						Completion of Concreting		April'16	
						Package-II (HM Works)			
						Erection of Surge Shaft Gate and HRT Intake Gate		April'16	
						Erection of Radial Gates		April'16	
						Package-III (EM Works)			
						Boxing up of Generator Unit-II		April'16	
						Mechanical Run Unit-II		May'16	
						Electrica BOP ready		April'16	
						Protection System		April'16	
						Package-IV(Switchyard & Transformer works)			
						Erection, testing & Commissioning of Transformers		May'16	
						Project Commissioning			
						Commissioning & Synchronisation of Unit -I with Grid		May'16	
						Commissioning & Synchronisation of Unit -II with Grid		June'16	
3	Tuirial HEP (60 MW), Mizoram	Generation of Hydro Power	0.00	40.12	154.96	Commissioning of the project	--	October'17	Project Works are under Progress.
						Lot-II(Dam & Spillway)	--		

									Completion of Dam filling			June'16	
									Completion of Spillway	--		July'16	
									Lot-III: Power House , Switchyard & other civil works				
									DT-2 plugging (Rd 357.08m to 377.00m) [beyond inclined bend]			September'16	
									Barrel Concreting, Unit-I up to EL-38.00 m	--		August'16	
									LOT - IV (Hydro Mechanical Works)	--			
									Power Water Way Roller Gate Erection			August'16	
									Erection of Radial gate of Spillway	--		August'16	
									Draft Tube Gate Erection			August'16	
									LOT - V (Electro Mechanical Works)	--			
									Erection of EOT Crane upto the end of Unit-II area			April'16	
									Assembly of Spiral Casing, Stay Ring, other Foundation Part and 2nd stage embedment (Unit-I & II)			July'16	
									Turbine Erection (Unit-I & II)			November'16	
									Erection of MIV			August'16	
									Lowering of Stator			February'17	
									Installation of equipments and commissioning of Switchyard			September'16	
									Spinning and Commissioning of Unit-I & II	--		October'17	...
4	Agartala Gas Turbine Plant - CC Extension (51 MW), Tripura	Generation of Thermal Power	0.00	0.00	9.52					--		March'17	Project was already commissioned in September 2015. The amount has been kept towards balance payment to be made in the year 2016-17 in respect of the project activities.

5	"Tripura Gas Based Power Project (101 MW)"	Generation of Thermal Power	0.00	0.00	35.20		--	March'17	Gas Turbine already commissioned in December 2015 and Steam turbine synchronized in January 2016. The amount has been kept towards balance payment in the year 2016-17 in respect of the project activities.
6	Grid Interactive Solar Power Project (5 MW), TGBP, Tripura	Generation of Solar Power	0.00	0.00	2.59		--	March'17	Project was already commissioned in February 2015. The amount has been kept towards balance payment to be made in the year 2016-17 in respect of the project activities.
7	Grid Interactive Solar Power Project (2 MW), Lanka, Assam	Generation of Solar Power	0.00	0.00	14.22	Commissioning of the Project	--	March'17	
8	Garo Hills Coal Based Power Project (500 MW), Meghalaya	Generation of Thermal Power	0.00	0.00	1.00		--	March'17	Coal linkage for the project is yet to be established. Keeping in view the present status, the amount has been kept towards establishment expenditures only, in respect of the project.
9	Survey and Investigation	Preparation of DPR etc.	0.00	0.00	34.80	Survey & Investigation works of the S&I schemes	--	March'17	S&I activities for the projects in various states for which NEEPCO signed MOA/PIA with the respective State Governments and also for S&I activities in respect of some other projects in pipeline.
10	Renovation & Modernisation of Kopili Power Station	Renovation & Modernisation	0.00	0.00	100.69	Renovation & Modernisation	--	March'17	Rehabilitation works of distressed hydraulic structures of Kopili HEP.

11	Joint Venture	Development of power projects	0.00	0.00	33.03	Share of equity	--	March'17	S&I activities for the projects in various states for which NEEPCO signed MOA with the respective State Governments for development in joint venture and also for some other projects in pipeline for development in joint venture including expected share of equity to be infused into the JV Company in respect of 120 MW dibbin HEP.
12	Grid Interactive Solar Power Project (3 MW), KHEP, Assam	Generation of Solar Power	0.00	0.00	16.23	Commissioning of the Project	--	March'17	
13	RE projects (2500 MW)	Generation of Power from solar/wind/small hydro projects	0.00	0.00	200.00		--	March'17	In line with the commitment made to the Govt. of India for setting up of 2500 MW renewable projects in India by NEEPCO within 2019-20.
14	"Mawphu HEP St-II (75 MW), Meghalaya"	Generation of Hydro Power	0.00	0.00	35.00		--	March'17	DPR is under scrutiny of CEA. Construction is expected to commence in 2016-17.
Grand total (MOP + DoNER):				206.25	890.91	(GBS = 206.25 Crs (166.13 (Kameng) + 40.12 (Tuirial (DoNER grant)))			
Less DoNER Grant				40.12					
Grand Total (minus DoNER Grant)=			0.00	166.13	890.91	(GBS = 166.13 Crs (Kameng)			

OUTCOME BUDGET 2016-17 CENTRAL ELECTRICITY AUTHORITY

(Rs. in crore)

Sl. No.	Name of Scheme / Programme	Objective / Outcome	Outlay 2016-17			Quantifiable Deliverables / Physical Outputs	Projected Outcomes	Processes / Timelines	Remarks / Risk Factors
			4(i) Non-Plan Budget	4(ii) Plan Budget	4(iii) CEBR				
1	2	3	4			5	6	7	8
1.	Technical Control Planning & Monitoring	Review of power sector performance, long-term & short-term planning, assessment of man-power & materials, long-term system planning studies including management studies of RPCs, concurrence to hydro power development schemes, monitoring construction of generation & transmission projects, monitoring of rural electrification and distribution planning, etc.	4491.33	-	-	(i) Monitoring of 48 hydro projects (14,218 MW) is in progress. During the year 2016-17, a hydro capacity of 2756 MW is likely to be commissioned. (ii) Thermal capacity of 14306 MW is likely to be commissioned during 2016-17 (iii) Data collection & publication of: a) Daily generation report. b) Monthly review of power sector performance. c) Monthly status reports on construction of various hydro and thermal projects. d) All India Electricity Statistics: General Review (Annual). e) Growth of Electricity Sector in India (Annual) f) Review of Performance of hydro power stations (Annual). g) Review of Performance of thermal power stations (Annual). (iv) Techno-economic appraisal and concurrence to hydro-electric projects.	(i) Reduction of gap between demand & supply of power in optimum time. (ii) Availability of statistics for public / inferences for planning and policy / decision making for the Indian Electricity Sector. (iii) Economical cost of generation of electricity. (iv) Accelerated pace of capacity addition to reduce demand and supply of power.	Continuous process	-
2.	Design & Consultancy	To provide technical support in Design & Engineering of power projects to power utilities and adoption of state-of-the-art technologies.	2445.00	-	-	At present 9 Nos. of consultancy projects are in hand.	It helps in dissemination of technology inputs to power utilities and creation of knowledge source and adoption of state-of-the-art technologies.	Continuous process	-

3.	Apprenticeship Training for Engineers	Imparting vocational training to Graduate / Diploma holders & Vocational under the Apprenticeship Act, 1961.	14.00	-	-	Training of 36 degree/ diploma holders	Availability of trained technical manpower in the country	Continuous process	-
4.	Contribution to International Bodies	To keep the engineers of CEA abreast of global technological developments in power sector.	0.80	-	-	Continuation of collective membership of CEA with CIGRE, Paris.	Updating of knowledge of CEA engineers in power system.	The CIGRE membership fee for the calendar year will be paid in March 2016	Continuous process
5.	Studies & Training	To improve performance of Engineers / functionaries.	46.00	-	-	Training to 1200 mandays to CEA employees.	Increase in productivity as a result of enhancement in knowledge and skill of CEA engineers.	Continuous process	-
6.	Electronic Data Processing & Support System	Operation and maintenance of computer systems provided in CEA and its sub-offices.	100.00	-	-	Maintenance of IT facilities (non-quantifiable) which includes maintenance of IMS Phase-I	Proper data management leading to increased efficiency	Continuous process	-
7.	National Load Despatch Center (NEPSIC)	The scheme is related to operation and maintenance of National Electric Power System Information Centre (NEPSIC) at New Delhi for collecting vital power system operational data from different Regional Power Committees (RPCs) for use in CEA / Ministry of Power.	9.00	-	-	Collection & analysis of power system operational data from different Regional Power Committees (RPCs).	Facilitation of secured & reliable operation of the Integrated Regional Grids.	Continuous process	-
8.	Departmental Canteen	To provide subsidized canteen facilities to the employees of CEA	46.70	-	-	Welfare measure (not quantifiable)	Employees satisfaction contributing to increased productivity	Continuous process	-
9.	Administration of Electricity Laws	Statutory inspection of HT installations of Central Sector and UTs.	266.29	-	-	Inspection of electrical installations totaling to 2,75,000 equivalent MV*. *Equivalent MV = 3 x (EHV + HV) + MV + 12 x ckm +30 x video	Assured safety of electrical installations and personnel.	Continuous process	-

10.	All India Load Survey Scheme	Collection of electric power survey data and preparation of preliminary forecast of electricity demand.	214.35	-	-	To collect data for electricity demand forecasting exercise from States / UTs. To collect data from HV / EHV industries having electricity demand of 1 MW and above and having captive power plants.	Collection of data & scrutiny for GR-2016.	Continuous process for bringing out Annual General Review and Growth of Electricity Sector in India from 1947 onwards.	
11.	Regional Coordination	The country has been demarcated into five Regions for the purpose of planning and operation of the power system. Regional Power Committees (RPCs) (erstwhile REBs) have been set up in all the five Regions for facilitating integrated operation of power system in the region for optimal utilization of the available power resources through functioning of various sub-committees such as Technical Coordination Sub-Committee, Operation Coordination Sub-Committee, Commercial Sub-Committee, Protection Sub-Committee and System Studies Sub-Committee, etc. The scheme is meant for funding the operations of the Regional Power Committees (RPCs)	575.35	-	-	Facilitation of coordinated operation of regional power grids in the country	Facilitation of secured and reliable operation of the Regional Grids.	Continuous process	-

12.	Regional Load Despatching Centres	The real time operation of all the regional grids is being carried out by RLDCs. Operation planning and coordination functions which facilitate the integrated operation of the power system continue to be with the Regional Power Committees (RPCs). RLDCs and RPCs have to operate in close coordination in achieving the benefits associated with integrated operation of the Regional power system.	795.18	-	-	Facilitation of coordinated operation of regional power grids in the country.	Facilitation of secured and reliable operation of the Regional Grids.	Continuous process	-
13.	Strengthening of Regional Electricity Boards (Now known as Regional Power Committees)	The objective of the proposal is to provide proper infrastructure support in the form of office building / staff quarters for the Secretariats of the SRPC / NERPC resulting in increased & better integrated operation of the regional grid.	-	350.00	-	1. To complete the construction of remaining residential quarters Type-IV (six nos.), Type-III (six nos.) & Type -II (six nos.)			

14.	Upgradation of IT facilities in CEA – Phase-II	Procurement of Desktop Computer, Printer, Multifunctional Device, UPS, Laptop Computer and Microsoft Office.	-	10.00	-	Release of payment for items procured under this scheme.	Upgraded IT facilities would yield higher work efficiency and faster service. Modern IT facilities would enable proper utilization of the schemes like National Power Data Management System (NPDMS) digitization of several activities like clearances, reports etc. Digitization of works with electronic data warehouse would be possible to increase transparency and endeavor towards paperless office.	Scheduled to be completed in 12th Plan period.	---
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15.	Technical Assistance by World Bank to support CEA for appointment of Consultants for addressing Barriers to Energy Efficiency R&M of Coal Fired generating units in India	<p>1. Implementation Support Consultancy (ISC) – Extension of Contract.</p> <p>2. Review of institutional Capacity and Implementation of Institutional Capacity Strengthening at CEA</p> <p>3. Study on Review of Experience from Pilot R&M interventions in Thermal Power Stations in India.</p>	-	50.00	-	<p>1. Review of Reports/ Output submitted by KPMG</p> <p>2. a) Final Report on comprehensive strengthening Plan for CEA.</p> <p>b) International Study tour to be organized by KPMG for about fifteen CEA Officers.</p> <p>c) Report on complete study.</p> <p>3. a) Draft Reports on Review of post R&M experience in O&M of TPS</p> <p>b) Draft Final Reports on:</p> <p>i) Review of Procurement Experience.</p> <p>ii) Review of Experience in Strengthening of O&M Practices.</p> <p>iii) Review of R&M Implementation Experience.</p> <p>c) Final Reports on :</p> <p>i) Review of Procurement Experience.</p> <p>ii) Review of Experience in Strengthening of O&M Practices.</p> <p>iii) Review of R&M Implementation Experience.</p> <p>iv) Review of Post R&M Experience in O&M</p> <p>d) Conduct a workshop in Delhi for Sharing of Experience.</p>	<p>2. a) Report on complete study, b) CEA officers will be benefited from the exposure of latest technology during Study tour.</p> <p>3. Sharing of experience of various power utilities in Energy Efficiency R&M schemes in thermal power stations in India.</p>	<p>1. Tenure of ISC is to be extended up to October 2016.</p> <p>2. Tenure of KPMG is under process for Extension of time period up to October 2016.</p> <p>3. Tenure of WAPCOS is under process for Extension of time period up to September 2016.</p>	
16.	Basin-wise Reassessment of Hydro-Electric Potential in the country	The study aims to carry out basin-wise review of the hydro potential within the country including identification of New Schemes, wherever possible. Review would help in planning and development of various projects, evacuation arrangement and Environmental Impact Assessment which would enable an optimal harnessing of hydro potential in each river basin.	-	300.00	-	Award of work to executing agency and start of work.	Award of work to executing agency and Data collection / Analysis by the agency.	Bids would be invited by limited tendering process form CPSUs/ SP-SUs to award the work.	

17.	Planning Model Software in CEA under revised Plan Scheme "Up gradation of information Technology (IT) facilities in CEA phase-II	Facilitate to carry out generation expansion planning study in the de-regulated environment, aid in the preparation of National Electricity Plan. Further, the Generation Expansion Planning model would serve the needs of CEA for carrying out power absorption studies for various power projects.	-	100.00	-	Scheme was approved by MOP on 09.12.2015 with an estimated cost of Rs. 250.00 lakhs. Evaluation of Bids, Procurement of Planning Software and Training of Staff, Testing and Installation of Software.	Facilitate to carry out generation expansion planning study in the de-regulated environment, aid in the preparation of National Electricity Plan. Further, the Generation Expansion Planning model would serve the needs of CEA for carrying out power absorption studies for various power projects.	April, 2017	
18.	19th Electricity Demand Forecast of India	To forecast the year-wise electricity demand for each State/ UT, Region and for the country upto the year 2026-27 and to also project the perspective electricity demand for the year 2031-32 and 2036-37 for each State/ UT, Region and for the country using economic method. Adoption of Econometric method for demand forecast would be beneficial as the use of advanced forecasting techniques for preparing the 19th Electric Power survey Report, would lead to a more accurate electricity demand forecast. This would further facilitate proper planning of resources for the country.	--	50.00	--	Preparation of tender documents, bidding process, evaluation of bids, selection of organization / firm for carrying out electricity demand forecast by econometric method, carrying out demand forecast and preparation of Report covering the forecasts.	Forecast of year-wise electricity demand for each State/ UT, Region and for the country upto the year 2026-27 and to also project the perspective electricity demand for the year 2031-32 and 2036-37 for each State/ UT, Region and for the country using econometric method.	To be completed by March, 2017	The scheme is yet to be approved.

19.	National Reliability Council for Electricity	<p>To compute the TTC & ATC of each Transmission corridor in the Grid on a monthly basis. Carry out the audit of the entire grid w.r.t. angular stability analysis, voltage stability and frequency stability on a three yearly basis, also taking into consideration the increased penetration of intermittent renewable sources of energy like wind and solar power. Suggest Special Protection Schemes of the Grid for grid security along with protection coordination on All India basis. Up gradation of knowledge in the field of grid reliability in the form of acquiring knowledge of best practices, through interaction with other reliability bodies in USA, Europe and Japan through capacity building. Any other matter related to Reliability of the Grid.</p>	--	50.00	--	<p>(i) Calculation of TTC, ATC and TRM on a monthly basis through consultant.</p> <p>(ii) Grid stability & evaluation of system protection schemes of entire Grid.</p> <p>(iii) Upgradation of knowledge in the field of grid reliability theory.</p>	<p>Optimum utilization of the transmission system and of intermittent source of renewable like wind and solar power, without compromising the reliability of the grid.</p> <p>Increased Reliability of the Grid.</p>	<p>Timeline for Col. 5: - (i) Monthly basis (ii) Expected completion 2016-17. (iii) By 2016-17</p>	Scheme yet to be approved.
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20.	Training of CEA Officers	Induction level training for AD-I & AD-II of CEA and to improve the performance of Engineers /functionaries of CEA.	--	90.00	--	Training of 1 batch of AD-II and 1 batch of AD-I (30+25) and Batch of 15 DDs+ 20 Directors+ 10 CEs	Imparting the new recruits' theoretical Training specific to the power Sector requirement and CEA, and by giving them practical exposure through case studies, site visits, training on simulators, and on-job training. Enhancing the efficiency and effectiveness of the in-service personnel by organizing for them customized structured training of 2-3 weeks duration at an interval of 3 years/ on promotion/ transfer to different divisions.	2016-17	
TOTAL			9004.00	1000.00	-				

OUTCOME BUDGET 2016-17 Forum of Regulator(FOR)

(Rs. in crore)

Sl. No	Name of Scheme/ Programme/ Project	Objective / Outcome	Outlay 2016-17			Quantifiable Deliverables/ Physical Outputs	Projected outcomes	Processes/ Timelines	Remarks/ Risk Factor
1	2	3	4			5	6	7	8
			4(i) Non-Plan Budget	4(ii) Plan Budget	4(iii) Complementary Extra-Budgetary Resources				
Capacity Building									
	Forum of Regulators	Capacity building by way of training / re-orientation of personnel of Regulatory Commission and availing consultancy.	1.00			<ul style="list-style-type: none"> Orientation programme for Chairpersons and Members of Electricity Regulatory Commissions (ERCs) 6-8 participants Residential Training Programme on "Protection of Consumer Interest" for Officers of CGRF and Ombudsman at NPTI Faridabad for around 25 participants. Capacity Building on various regulatory aspects, tariff fixation at IIT Kanpur (foreign components at Singapore) for about 25 participants. 	<ul style="list-style-type: none"> Exposure to Chairpersons and Members of ERCs on international best practices in regulatory field. Officers of CGRF and Ombudsman are trained on best practices in the area of Consumer Interest. This programme is conducted to orient officers of ERCs on regulatory practices and other areas in power sector both in India and international experience. 	February 2017. February 2017. November 2016.	

Consultancy						
			<ul style="list-style-type: none"> • Study on Electricity Storage System 	<ul style="list-style-type: none"> • Study on Price Cap Regulation for Distribution and Supply Margin. • Study on Model Operating Norms for Distribution Networks 	<p>Analyse relative merits and demerits of each technology, present status of development and measures, if any, to incentivize technologies.</p> <p>Recommend guidelines for "Price Cap Regulation for Distribution and Supply Margin"</p> <ul style="list-style-type: none"> • Evolve Model Guidelines on Operating Norms for Distribution Networks 	<p>Process of awarding to commence from April 2016</p> <p>Process of awarding to commence from June 2016</p> <p>Process of awarding to commence from November 2016</p>

OUTCOME BUDGET 2016-17
Central Power Research Institute (CPRI)

(Rs. in crore)

Sl. No.	Name of Scheme/ Programme	Objective/ Outcome	Outlay 2016-17			Quantifiable Deliverables/ Physical Outputs	Projected Outcomes	Process/ Timelines	Remarks/ Risk Factors
1	2	3	4	4	5	6	7	8	
			4(i)	4(ii)	4(iii)				
			Non Plan Budget	Plan Budget					
(Rs.)	Complementary Extra Budgetary Resources								
1	Participation of CPRI as Fifth Equity Partner in J.V. Company National High Power Test Laboratory Pvt. Ltd. (NHPTL)	Objective was to become a JV partner in the NHPTL Company for establishing High Power Test facilities		-				NHPTL communicated the revised equal equity share of each JV Partner as Rs.30.40 Crore. Hence, additional release of balance grant of Rs.6.40 crore for payment to NHPTL towards balance equity contribution of CPRI as J.V. partner.	
2.	Augmentation of test facilities for optimization of 800 kV AC and 800 kV DC transmission system	To augment test facilities for conducting optimization studies & transmission system of 800 kV AC & 800 kV DC rating		-			Commissioning of AC test system	April-2016 to June-2016	The project duration extension sought from MoP upto June 2016 vide letter No. CPRI/P&C/4/1/ XI Plan 2015 dtd.23.12.15.

3.	Augmentation of High Voltage, Diagnostic Relay, Vibration, LED test facilities and infrastructure protection	Upgradation of High Voltage facilities at Bangalore and Bhopal units and establishment of EMI/EMC & LED test facilities	-	-	-	-	Continuation of construction of EMI/EMC lab.	April 2016 to March 2017	Out of nine project components only one project component is still to be completed. The project duration extension sought for two years & approved by the Standing Committee at its meeting held on 17th August 2015
XII Plan approved Projects									
1.	(i) Augmentation & New Facilities Projects (Outlay: Rs.105.90 Crs.)		17.96				Tendering and placing of order, Delivery of some major equipments, Initiation of civil works.	April 2016 to March 2017	Project approved on 25th February 2014 by MoP.
	(ii) Augmentation of High Power Short Circuit Test Facilities by installation of two additional 2500 MVA Generators and associated equipment (Outlay: Rs.640.00 Crs.)		61.84				NIT and placing of order	April 2016 to March 2017	Project approved by MoP on 5th January 2017.
	(iii) Establishment of New Test Facilities (Outlay: Rs.356.10 Crs.)		27.20				Tendering and placing of order	April 2016 to March 2017	Project approved by MoP on 5th January 2015.
2.	Plan R & D (Rs. 80.00 Crs.)								
	1. Plan R & D	To help address challenges in power/electricity, including reliability efficiency, safety and environment	3.00	-			Implementation of the projects approved by RC Committee	April-2016 to March-2017	Ten projects are continuing, Sixteen projects will be taken up during the year.
	2. Research Scheme on Power (RSoP)	Project proposals are invited from academia, power utilities, industries as well as research institutes and are approved by an expert committee on research scheme on power	5.00	-			Implementation of the projects approved by EC on RSoP	April-2016 to March-2017	Nine projects are continuing, Eighteen projects will be taken up during the year.
	3. National Perspective Plan (NPP)	NPP projects are taken for undertaking projects identified under National Perspective Plan as approved by SCR&D, MoP	10.00	-			Implementation of the projects approved by SCR&D	April-2016 to March-2017	Four projects are continuing. Further, projects will be taken up after approval of SCR&D.
			125.00						

OUTCOME BUDGET 2016-17
NATIONAL POWER TRAINING INSTITUTE

(Rs. in crore)

SL No	Name of Scheme	Objective/ Outcome	Outlay 2016-17			Quantifiable Deliverables/ Physical Outputs	Projectd Outcomes	Processes/ Timelines	Remarks/ Risk Factors
			Non-Plan	Plan	Complementary Extra Budgetary Resources				
1	2	3	4(i)	4(ii)	4(iii)	5	6	7	8
1	Modernization & up gradation of Training Facilities at Corporate Office, Faridabad			1.80		Training activities will be increased after completion of the scheme.	Work is under progress	2016-17	
	B-New Scheme								
1	Setting up of National Power Training Institute at Alappuzha, Kerala			10.00		Training activities will be increased after completion of the scheme.	Work is under progress	2016-17	
2	Renovation, Modernization and Augmentation of training infrastructure of Nine Instituits of NPTI			13.20		Training activities will be increased after completion of the scheme.		2016-17	
3	Setting up of National Power Training Institute at Shivipuri. M.P			8.00		Training activities will be increased after completion of the scheme.		2016-17	
5	Non-Plan for Pension fund		7.40						
	Total		7.40	33.00					

OUTCOME BUDGET 2016-17
DEEN DAYAL UPADHYAY GRAM JYOTI YOJANA (DDUGJY)

(Rs. in crore)

Sr. No.	Name of Scheme/ Programme	Objective/Outcome	Outlay 2016-17			"Quantifiable Deliverables/ Physical Outputs (2016-17)"	Processes/ Timelines	Projected Outcomes	Remarks/risk Factors
			Non-Plan Budget	Plan Budget	Complementary Ex-Budgetary Resources				
1	2	3	4(i)	4(ii)	4(iii)	5	6	7	8
1	DDUGJY	"i. Separation of agricultural and non-agricultural feeders for providing un-interrupted power supply. ii. Strengthening and Augmentation of Sub Transmission & Distribution infrastructure. iii. Metering for feeders, distribution transformers & consumers for energy auditing and reduction of AT&C losses. iv. Providing access to electricity to villages and households."	4(i)	3000.00	4(iii)	"(i) Electrification of 8360 un-electrified villages (ii) Providing free electricity connections to 14 Lakhs BPL Households"	After sanction of projects, contracts for execution of projects are to be awarded by States Dis-coms / Power Deptts. within 6 months. The projects shall be completed within 24 months from date of award.	Will facilitate overall rural development, employment generation and poverty alleviation	(a) Remaining villages covered under the scheme are located in far-flung areas involving difficult terrain, poor road connectivity and proximity to naxal affected areas (b) Delay in statutory clearances (Forest/Rail-way crossing) (c) Right of way issues/ delay in providing land for sub-stations by states (d) Contractual issues between Implementing Agencies (DISCOMs) and Turn-key contractors Further, there can be delay in the programme due to unexpected events, natural calamities etc.

OUTCOME BUDGET 2016-17

Intergrated Power Development Scheme (IPDS)

(Rs. in crore)

S. NO.	NAME OF SCHEME/ PROGRAMME	OBJECTIVE/ OUT-COME	OUTLAY 2016-17			QUANTIFIABLE/ DELIVERABLES/ PHYSICAL OUTPUTS	PROCESS TIME-LINES	PROJECTED OUT-COMES	REMARKS/RISK FACTORS
			NON-PLAN BUDGET	PLAN BUDGET	COMPLEMENTARY EXTRA BUDGETARY RESOURCES				
1	Integrated Power Development Scheme (IPDS/R-AP-DRP)	"IPDS:Strengthening of sub-transmission and distribution network in urban areas including provisioning of solar panels on govt. buildings including net-metering, Metering of feeders/ distribution transformers/ consumer in urban areas and, IT enablement of distribution sector and strengthening of distribution network. R-APDRP: Attainment of Reliable and verifiable baseline data of energy & revenue and AT&C Loss reduction on sustained basis"	NIL	5500	NIL	IPDS/R-APDRP- 1. Part A completion of 50 Go-Live towns. 2. Part B completion of 200 towns 3. Establishment of SCADA/ Control Centres in 12 towns 4. Comprehensive capacity building under R-APDRP - 500 mandays.	"IPDS- After implementation, the utility should be able to address critical gaps in sub-transmission and distribution network and also achieve the reduction of AT&C loss agreed trajectory between MoP and utilities, till 2019-20. R-APDRP- After implementation of Part-A(IT) in the project area, state power utilities should be able to achieve reliable & verifiable baseline data & hence locate AT&C Loss pockets & further contain them through technical & managerial interventions. Implementation of Part-B shall enable reduction of AT&C losses through technical interventions. The focus of Part-B is AT&C loss reduction to below 15% in project areas. Implementation of SCADA shall reduce power interruptions & improve quality of power supply."	The success of the scheme will depend on smooth & timely implementation of the projects under IPDS and R-APDRP by State Utilities in accordance with IPDS/R-AP-DRP guidelines and administrative efforts by utilities for AT&C Loss reduction as per targets.	
			Total	5500					

OUTCOME BUDGET 2016-17

Bureau of Energy Efficiency

(Rs. in crore)

Sl. No.	Name of Scheme/ Programme	Objective/ Outcome	Outlay 2016-17 (Plan)	Quantifiable Deliverables/ Physical Outputs	Projected Outcomes	Processes/ Timelines	Remarks/ Risk Factor
1	2 BEE Schemes	3	4	5	6	7	8
1	Standards, Codes & Labelling for Appliances, Buildings & Energy Efficiency Research Centre	<ul style="list-style-type: none"> - Enhance Credibility of the on-going S&L program - Achieve energy saving in line with national policy through end-use energy efficient products - Increase the visibility of the program among different stakeholders 	2.00	<ul style="list-style-type: none"> - New Product labeling: Inclusion of 2 new products under the S&L scheme. - Inclusion of one product in mandatory labeling program. - Continuation of awareness campaign. - Up gradation of Standard for 2 appliance. - Enhancement of check-testing activities by Independent agencies and SDAs. - Strengthening of test laboratories. 	<ol style="list-style-type: none"> 1. Launch of voluntary program for voltage stabilizer and passenger cars. 2. Notification of energy performance standards for TFL under mandatory S&L program. 3. Includes training program for retailers, awareness campaign through radio and other media segments. 4. Check testing of all products as per the sampling plan. 5. Review of fund utilization of test laboratories to which government grant has been extended. 6. Up gradation of standard for direct cool refrigerator and Ceiling Fans. 7. Development of enforcement of S&L scheme 8. Development of fuel efficiency standards for heavy duty vehicles. 	<p>Progressively from April, 2016 to March, 2017.</p>	<p>Targeted saving of 3.45 BU and in terms of avoided generation capacity is 550 MW</p>

Energy Conservation Building Code (ECBC)	2.00		<p>Implementation of ECBC in commercial buildings.</p> <p>Adoption of ECBC</p> <ul style="list-style-type: none"> - Amendment, notification & adoption of ECBC in remaining states. - Modification in Schedule of Rates (SoR) & building bye-laws for states. - Conduction of National Level and State Level Capacity Building conferences/meetings - Administration & Enforcement of ECBC Implementation - Establishment of ECBC Cells in states (PWD, MoUD & SDAs) - Development of Test Standards & Programmes for lighting and HVAC components. - Support for creation of building material testing laboratories. - Development of ECBC training packages and training schedule - Conduction of Certification examination for ECBC Certified Building Energy Auditors - Create a cadre of ECBC expert firms/ professionals. - Development of Energy Efficient Guidelines for Multi storey Residential Buildings for Warm & Humid climatic zone. - Facilitation of ECBC Demonstration projects. 	<ul style="list-style-type: none"> - Adoption of ECBC by remaining states. - Creation of Pool of Master Trainers. - Creation of cadre of ECBC Certified Building Energy Auditors - Minimum energy performance standards for building components. - Update and launch of ECBC 2016. - Development of benchmarking/ database for commercial buildings. - Building up capacities of states to support implementation of ECBC. - Dissemination of information on ECBC and Case studies through demo projects. - IGEAs in public buildings. - Expansion of existing Star Rating Scheme hotel building category. - Directory of Energy Efficient building material. 	Progressively from April, 2016 to March, 2017.	
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- Data collection and creation of framework for monitoring structure for information flow.																		
- Support for demonstration projects in public & government sector																		
- Establishment of feasibility studies.																		
Energy efficiency in existing buildings																		
- Facilitation of energy assessment & implementation of DPRs in government buildings																		
- Supporting energy assessment and performance enhancement by retrofitting in government buildings																		
- Continuation of existing ESCO accreditation process.																		
- EE Implementation in Public Buildings through ESCO route.																		
- Performance enhancement of commercial building based on Star Rating.																		
- Assistance to states for Energy Assessment and EE Implementation.																		
- Expansion of existing Star Rating Scheme to include Hotels																		
- Up gradation of the existing Star Rating Scheme for buildings																		

2	Strengthening of SDA's for Energy Efficiency	SDA Strengthening Programme	- To empower the SDA's as partners of BEE at state level to implement EC Act.	26.96	32.96	<p>Awareness campaign through Print and Electronic Media & Impact assessment</p> <ul style="list-style-type: none"> - Development of awareness and outreach programme. - Monitoring & Impact assessment of savings through Star rating & ECBC implementation buildings. • Continuous engagement with the SDA's through regional meetings and National Workshops. • Disbursement of financial support to SDA's for the following activities: <ul style="list-style-type: none"> - Implementation of energy efficiency measures to showcase the potential of energy efficiency through demonstration projects. - LED village campaign. - Institutionalization of enforcement machinery at the state level programmes. - Manpower support to the SDA's. - Workshops / training programs involving energy professionals. - Analysis and survey of the impact of energy conservation activities by the SDA's. - Publicity/awareness on energy efficiency in the states. 	<ul style="list-style-type: none"> • 10 demonstration projects. • Publicity & awareness campaigns on energy efficiency, workshops / training programmes, database up gradation etc. will be conducted in all SDA's. • Establishment of enforcement machinery in SDA's including providing manpower support. • Regional review meetings involving all the SDA's to review the physical and financial progress. • National level meeting involving all the SDA's to review the physical and financial progress. 	Progressively from April, 2016 to March, 2017.				

							<ul style="list-style-type: none"> - Maintenance and updation of internet platform and other database created. • Providing guidelines regarding timely utilization of financial support provided. 	<ul style="list-style-type: none"> • Matching contribution/ establishment of SECF in atleast 3 states. 	Progressively from April, 2016 to March, 2017.	
							<ul style="list-style-type: none"> • Constitution of SECF in the states and matching contribution by the state governments to the SECF. • Coordinate with SDAs to implement various energy conservation activities and utilization of fund under SECF. • Disbursement of Rs. 10.00 crores as contribution to SECF. 	<ul style="list-style-type: none"> 1. Development of materials on Energy Conservation for School/ ITI / Diploma Engg. College curriculum. 2. Debates at Degree College level, ITI, Diploma Engineering College (Polytechnic), Engineering College level and Quiz competition at school level. 3. Establishment/ Strengthening of energy clubs in schools. 4. Development of tip sheets/brochures on Energy Conservation in vernacular/ local languages providing information regarding efficient use of utilities for ITI students. 	Progressively from April, 2016 to March, 2017.	

				<p>5. Development and printing of question banks/ energy audit situation analysis in sector specific energy efficiency enhancement and its dissemination among Energy Managers and Energy Auditors.</p> <p>6. Development of sector specific best practice guide on Energy Efficiency and it's printing for engineers in 8 sectors and organization of interactive workshops for Energy Auditors and Energy Manager.</p> <p>7. Energy Audit Instrument Support for Energy Auditors.</p> <p>8. Theory cum Practices oriented training programmes for operators on energy efficiency in boilers, furnaces and power plants, Preparation of materials in English and its translation in local languages (including printing) on efficient use of fuels in furnaces and boilers.</p> <p>9. Development of tip sheets/fliers (including translation in vernacular languages and printing) on energy efficiency improvement in domestic, industry, agriculture, commercial buildings and schools for general readership</p>		<p>model making and celebration of Urja divas etc. done.</p> <p>4. Tip sheets /brochures on energy conservation for pumps in vernacular language for ITI students will be prepared for 25 states by respective SDA's.</p> <p>5. Development of question banks/FAQ for energy auditors and managers by BEE and its dissemination through SDAs.</p> <p>6. Development and printing of sector specific best practice guides for 5 sectors (i.e. Aluminium, Textile, Fertilizer, Chlor Alkali and Pulp & paper) and its dispatch to SDAs.</p> <p>7. Each SDA will support at least 5 auditors in each state and 15 states will be targeted this year.</p> <p>8. Four theory cum practice oriented workshops conducted for operators in each state. It is proposed to be conducted in 15 states throughout the country.</p> <p>9. Preparation of tip sheets/fliers by BEE on energy efficiency in five categories i.e. domestic, industry, agriculture, commercial buildings and schools.</p>					
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3	Demand Side Management (DSM) (Agriculture, Municipal & SME)	Energy Efficiency in Small and Medium Enterprises (SME)		1.00	28.33	10. Capacity building of certifiers, experts, building and industry on ISO 50001 and Energy Management Systems. 1. Initiate the implementation of demonstration projects in the 5 Energy Intensive SME sectors. 2. Conduct stakeholder workshops in sectors where technologies have been implemented. 3. Initiate the PAN India energy benchmarking study for energy intensive SME clusters.	10. One workshop will be conducted for certifiers. 1. 20 demonstration projects of at least 10 technologies in 5 SME sectors. 2. Hiring of an agency to carry out PAN India benchmarking of the energy consumptions in energy intensive clusters. Complete identification of such clusters in the country. 3. Conducting 5 stakeholder workshops in five sectors in association with Cluster associations and the SDAs.	Progressively from April, 2016 to March, 2017.	
		Agriculture DSM		1.00		1. Initiate the activities to facilitate the state governments to implement the mandatory notification for new agriculture connections. 2. Facilitate DISCOMs to review the DPRs and implement pilot projects in 2 states. 3. Stakeholder consultation/ workshops to be organized. 4. Consultation session with PHED to identify the pilot project and initiate preparation of feasibility report.	1. Integrating AgDSM scheme with existing GOI schemes. 2. Implementation 42 DPRs in 2 states. 3. 4 states for mandatory notifications.	Progressively from April, 2016 to March, 2017.	

Municipal DSM			1.00	28.33	<p>1. Investment Grade Energy Audit for the 204 water bodies</p> <p>2. Up-gradation of MuDSM portal for the online analysis and portal data Management.</p> <p>3. Shortlisting of ULBs to undertake implementation of pilot projects identified in DPRs.</p> <p>4. Capacity building of ULB officials</p> <p>5. Engagement of technical staffs to shortlisted ULBs.</p> <p>6. Identification of one ULB for implementation of pilot project in Sewage Water treatment Plant.</p>	<p>1. Capacity building of officials of ULBs and technical experts deputed.</p> <p>2. Selection of 14 ULBs for implementation of demo projects.</p> <p>3. Implementation of demonstration projects 6 ULBs.</p> <p>4. Conducting investment grade audits in 204 water bodies and development of bankable DPRs.</p> <p>5. Preparation of DPR for pilot project in Sewage Water treatment Plant.</p>	Progressively from April, 2016 to March, 2017.			
Capacity building of DISCOMS	- capacity building of the DISCOMs to implement DSM in their respective areas		25.33	<ul style="list-style-type: none"> Pursuing with the DISCOMs for establishment of DSM cell in the remaining DISCOMs. Hiring of agency for organizing workshops for training of circle level officials of DISCOMs under "Capacity Building of DISCOMs" activity. Coordinate with EESL and consultants for completion of Load survey in 34 DISCOMs. Coordinate with EESL for development of DSM action plan for these DISCOMs. Pursuing with the SERCs for notification of DSM regulations. 	<p>1. Establishment of DSM cell by all DISCOMs participating under this programme.</p> <p>2. About 5000 circle level officials of DISCOMs would be trained on DSM and Energy Efficiency under "Capacity Building of DISCOMs" activity.</p> <p>3. Completion of Load survey and development of DSM action plan for 34 DISCOMs under this programme.</p> <p>4. Adoption and notification of DSM regulation by all states.</p>	Progressively from April, 2016 to March, 2017.				
Total			63.29	63.29						

EAP Scheme							
1	BEE-GEF-WB MSME project	BEE-GEF-WB MSME project	- To increase demand for energy investment in MSMEs and to build their capacity to access commercial finance.	0.71	0.71	0.71	Progressively from April, 2016 to March, 2017.
						<ul style="list-style-type: none"> • Development of Media Creative's for generating awareness and outreach on energy efficiency <ul style="list-style-type: none"> • Development of web based Knowledge Portal and Help line • Demonstration of techno-economically feasible energy efficient technologies 	<ul style="list-style-type: none"> 1. Media creative's include documentaries, technical exhibitions, promotional features in news paper/ technical magazines etc.; 2. Launch of Web portal and helpline; 3. Developing a Motor efficiency training centre. 4. Knowledge Management & Sharing <ul style="list-style-type: none"> a. cross cluster programmes c. Case studies/success stories (approx 2 per cluster) 5. Demonstration of 2 energy efficient technology;
	Total				64.00	64.00	

OUTCOME BUDGET 2016-17 ENERGY CONSERVATION

(Rs. in crore)

Sl. No.	Name of Scheme/ Programme	Objective/ Outcome	Outlay 2016-17 (Plan)	Quantifiable Deliverables/ Physical Outputs	Projected Outcome	Process/ Timelines	Remarks
1	2	3	4	5	6	7	8
1	- Energy Conservation Scheme (i) National Energy Conservation Day/Awards (ii) School, State and National Level Painting Competition for School Children (iii) Awareness & Publicity (iv) Student Capacity Building Programme	- To recognize the efforts of industrial and other establishment consumers to adopt energy conservation measures which may become models for others to emulate. - To inculcate in children the relevance of energy efficiency and conservation. - To spread the message of energy conservation and efficiency through the media. - Capacity Building of Students	49.17 49.17	<ul style="list-style-type: none"> • Creation of data base and its analysis EC Award participating units. - Compilation and dissemination of best-practices in industry and building sector. - Continuation of EC Awards on energy conservation. <ul style="list-style-type: none"> - Continuation of paintings competition on energy conservation. <ul style="list-style-type: none"> - Awareness campaign on energy conservation through print, electronic and other media for general public. 	<ul style="list-style-type: none"> - National Awards to industry and other establishments, such as buildings (office, hotels, hospitals, BPOs), Railways, State Designated Agencies and electricity distribution companies for achieving energy savings. <ul style="list-style-type: none"> - Organization of painting competition for school children all over the country. <ul style="list-style-type: none"> - Awareness creation in general public. 	Progressively from April 2016 to March 2017. The Award function is scheduled for 14th December, 2016.	

	National Mission on Enhanced Energy Efficiency (NMEEE)	NMEEE is one of the eight national missions under the NAPCC. NMEEE aims to strengthen the market for energy efficiency by creating conducive regulatory policy regime and has envisaged fostering innovative and sustainable business models to the energy efficiency sector. The provision is for operationalization of the NMEEE.	46.83	50.83	<ul style="list-style-type: none"> - Development of materials on energy conservation for School/ITI/Diploma Engg. College Curriculum. - Training of School teachers/ lecturers on the new modules/curriculum. - Debates at Degree College level, ITI, Diploma Engineering College level & quiz competition at school level. - Establishment/ Strengthening of energy clubs in schools. - Developments of tip sheets/ brochures on Energy Conservation. 	<ul style="list-style-type: none"> - Students capacity building. 	Progressively from April, 2016 to March, 2017.	
					<p>Perform, Achieve and Trade (Industries)</p> <ul style="list-style-type: none"> - PAT Cycle –I - Verification of performance assessment documents submitted by respective DCs after Monitoring & Verification (M&V) by EmAEA. - Analysis of Monitoring and Verification Reports and also for the MEA reports. - Preparation of committee review upon evaluation of M&V Reports submitted by DCs. - Verification of compliance of energy consumption norms and standards via compliance documents submitted by DCs in Form 'D'. - Training to DCs for trading of ESCerts via PAT Net Portal. 	<ul style="list-style-type: none"> - Assessment of energy savings. - Analysis reports. - Analysis reports. - True Achievement - Training and Workshops - Draft Vision Document 		

Bachat Lamp Yojana (BLY)	- To promote energy efficient & high quality CFLs as replacement for incandescent bulbs in households.	2.00	50.83	<ul style="list-style-type: none"> - Maintain the institutional structure of Coordinating and Managing Entity (CME). - Provide technical assistance for monitoring and verification of individual projects. - Monitoring and verification of savings achieved for the implementation of LED projects under DDUGJY Scheme (subject to implementation of LED projects by Rural Electrification Corporation under DDUGJY scheme). 	<ul style="list-style-type: none"> - Issuance of CERs for 4th Monitoring Period for projects under BLY-PoA. - Monitoring and Verification of savings achieved for the implementation of LED projects under DDUGJY Scheme (subject to implementation of LED projects by Rural Electrification Corporation under DDUGJY scheme). 	Progressively from April, 2016 to March, 2017.
Super Efficient Equipment Programme (SEEP)	- For accelerating the shift to energy efficient appliances in designated sectors to create demand for super-efficient appliances like ceiling fans/ Refrigerator/ agricultural pumps etc.	2.00		<ul style="list-style-type: none"> - Contracting Fan Manufacturers and Measurement & verification agency. - Finalization of Media plan - Release of Advertisement and media campaign - Testing at manufactures' base for type test and random testing at retailer level. - Agreement signature between BEE and MVA and BEE and SE fan manufacturers. 	<ul style="list-style-type: none"> - M&V agency engaged and Manufacturers contracted - Outreach material - Number of ad released - Test reports - Legal agreement 	Progressively from April, 2016 to March, 2017.
Total			100.00			

OUTCOME BUDGET 2016-17 Smart Grid

(Rs. in crore)

S. No.	Name of Scheme/ Programme	Objective/ Outcome	Outlay 2016-17			Quantifiable Deliverables/ Physical Outputs	Projected Outcomes	Process/ Time-lines	Remarks/ Risk Factors
(1)	(2)	(3)	4(i) Non-Plan Budget	4(ii) Plan Budget	4(iii) Complimentary Extra Budgetary Resources	(5)	(6)	(7)	(8)
1	NSGM	Development of Smart Grid in Smart Cities	-	22.00	Nil	-	The smart grids will help us in better asset as well as generation capacity utilisation. Thus Smart Grids shall help us Serve more consumers per Megawatt of generation and will be an important tool for achieving the goal of 24X7 access of power for all by 2019 and GoI is committed to implementing these technologies for the larger benefit of consumers.	-	The disbursement of funds will be done after the placement of award for system Integrator by utilities and subsequent completion of project milestones.-
2		Training & Capacity Building (Funding for SGKC etc.)	-	4.00	Nil	-		-	
3		NSGM establishment O&M etc.	-	4.00	Nil	-		-	
		Grand Total		30.00					

OUTCOME BUDGET 2016-17
Green Energy Corridor

(Rs. in crore)

Sl. No.	Name of Scheme / Programme	Objective/ Outcome	Outlay 2016-17			Quantifiable Deliverables/ Physical outputs	Projected Outcome	Processes / Timelines	Remarks / Risk Factors
1	2	3	4			5	6	7	8
			Non-Plan Budget 4(i)	Plan Budget 4(ii)	Complementary extra-budgetary Resources 4(iii)				
1.	Green Energy Corridors Scheme (GEC)	Creation of Renewable Energy Management Centres (REMC) under GEC	0.10 (Token Provision- Plan)				REMC will facilitate integration of envisaged Renewable Generation capacity, a comprehensive transmission plan comprising intra state and interstate transmission system strengthening as well as Control Infrastructure under "Green Energy Corridors". etc .		Only a token provision has been provided at this stage
		Total	0.10						

OUTCOME BUDGET 2016-17
National Electricity Fund (NEF) Interest Subsidy Scheme

(Rs. in crore)

S. No.	Name of Scheme / Programme	Objective / outcome	Outlay 2016-17			Quantifiable deliverables/ Physical Outputs	Process/ timelines	Remarks/ risk factor
			Non-Plan Budget	Plan Budget	Complementary Extra Budgetary Resources			
1	National Electricity Fund (Interest Subsidy Scheme)	<p>3.</p> <p>1. To mitigate the funding gap and to promote capital investment in the distribution sector(Public and Private Power Utilities) by providing interest subsidy, linked with reform measures, on loans taken by public and private power utilities for various capital works under distribution projects.</p> <p>2. To provide interest subsidy and other charges aggregating to Rs 8466 Crs for a period of 14 years on loans availed by the distribution utilities in both Public and Private sector.</p>	4.	5. 25.00	6.	7. 1. Evaluation of pre-eligibility conditions & eligibility parameters for discoms. 2. Put up the interest subsidy claim proposal to steering committee for consideration. 3. Release of approved interest subsidy to discoms/lenders	8. 2014-15	9. The outlay proposed during FY 2014-15 shall vary depending upon the actual disbursement availed from the lenders by the Discoms during FY 2012-13 & 2013-14. Eligible quantum of the interest subsidy under NEF is linked with achievement of various reforms/ performance parameters by DISCOMS as specified in NEF Guidelines. So the proposed outlay shall mainly depend upon the performance of theDiscoms.

OUTCOME BUDGET 2016-17

Financial Support for Debt Restructuring of DISCOMs

(Rs. in crore)

S. No.	Name of Scheme / Programme	Objective / outcome	Outlay 2015-16			Quantifiable deliverables/ Physical Outputs	Process/ timelines	Remarks/ risk factor
			Non-Plan Budget	Plan Budget	Complementary Extra Budgetary Resources			
1.	2.	3.	4.	5.	6.	7.	8.	9.
1	Financial Support for Debt Restructuring of State Owned Discoms (Transitional Finance Mechanism) a) Reduction in AT&C Losses b) Capital Reimbursement Support	To ensure the financial viability of State Owned Discoms		0.01		Reduction in AT&C losses beyond the trajectory specified under RAPDRP with base year 2010-11 Reduction in Gap between ARR & ACS and consequently accumulated losses	Fulfillment of mandatory conditions under Part C of the Scheme The benchmark of AT&C losses would be the base year 2010-11 on the audited accounts of Discoms by CAG	The incentive is in addition to the grant/benefit under RAPDRP and is available for three years starting from 01-04-2012. Capital Reimbursement Support would be given by Govt. of India subject to fulfillment of mandatory conditions and State Government taking over the entire 50% of the Short Term Liability (Corresponding to the accumulated as on 31-03-2012 in respect of Haryana, Rajasthan, Tamil Nadu and Uttar Pradesh and 31-03-2013 in respect of Bihar, Jharkhand and Andhra Pradesh).

OUTCOME BUDGET 2016-17
Power System Operation Company (POSOCO)

(Rs. in crore)

Sl. No.	Name of Scheme / Programme	Objective/ Outcome	Outlay 2016-17			Quantifiable Deliverables/ Physical outputs	Projected Outcome	Processes / Timelines	Remarks / Risk Factors
			Non-Plan Budget	Plan Budget	Complementary extra-budgetary Resources				
			4(i)	4(ii)	4(iii)				
1	Power System Operation Company (POSOCO)	Setting up of Power System Operation Corporation (POSOCO) as an Independent Government Company		81.21 (Plan)			This will facilitate transfer of equity from PGCIL to Government of India by 31.05.2016 with an outlay of Rs.81.21 crore.	C C E A approved the scheme on 10.12.2014. Further action is in process.	
		Total		81.21					

OUTCOME BUDGET 2016-17 Transmission Schemes

(Rs. in crore)

S. No.	Name of the Scheme/ Programme	Objective/ Outcome	Outlay 2016-17			Quantifiable Deliverables/ Physical Outputs	Projected Outcomes	Processes/ Timelines	Remarks/ Risk Factors
1.	2.		4.			5.	6.	7.	8.
			4(i)	4(ii)	4(iii)				
			Non Plan Budget	Plan Budget	Complementary Extra-Budgetary Resources				
A	Strengthening of 220KV Transmission System from Alusteng (Srinagar) to Leh (via Drass, Kargil&Khalsti 220/66 KV sub-station) and 66 KV interconnection system for Drass, Kargil, Khalsti and Leh sub-stations in J&K		Nil	250	-	NITs for all the packages awarded and work on transmission lines/substations are in progress. Physical progress of the transmission line as on 31.12.2015 briefly as below: Towers erected: 353/1034 Foundations completed: 365/1072 Stringing: Nil/330 km.	(i) 220kV Alusteng-Drass S/C line &66kV Drass-Drass(RGGVY) D/C line and associated Sub-station works at Alusteng&Drass: (ii) 220kV Drass – KargilS/C line &66kV Kargil – Kargil (RGGVY) 2xD/C line and associated Sub-station works at Drass&Kargil	July, 2017 July, 2017 Aug, 2017 Aug, 2017	

						<p>(iii) 220kV Kargil – Khalsti S/C line & 66kV Khalsti – Khalsti (RGGVY) D/C line & associated Sub-station works at Kargil & Khalsti.</p> <p>(iv) 220kV Khalsti – Leh S/C line & 66kV Leh – Leh (RGGVY) 2xD/C line & associated Sub-station works at Khalsti & Leh</p>	<p>Tenders for all the 33 packages for transmission lines/substations have been issued and award of the packages are expected to be commenced from March, 2016 onwards. The work on the transmission lines/substations would be started after award of the packages. Land acquisition process is in progress for substations.</p>		
B.	Strengthening of Transmission System in the States of Arunachal Pradesh & Sikkim.		Nil	273	-	<p>The scope of the project involves 4,239 ckm which contains 134 transmission/distribution lines of various capacities at 132/66/33 KV and 1,754 MVA capacity which contains 115 substations of various capacities at 132/66/33/11 kV.</p>	<p>Tenders for all the 50 packages for transmission lines/substations have been issued and award of the packages are expected to be commenced from March, 2016 onwards. The work on the transmission lines/substations would be started after award of the packages. Land acquisition process is in progress for substations.</p>	Dec., 2018	
C.	NER Power System Improvement Project in six North Eastern States excluding Arunachal Pradesh and Sikkim (i) Non-EAP component (ii) EAP component Total (i) and (ii)		Nil	234		<p>The scope of the project involves 4,144 ckm which contains 123 new transmission/distribution lines of various capacities at 220/132/33/11 KV and 5,671 MVA capacity which contains 118 new substations of various capacities at 220/132/33/11 kV.</p>	<p>Tenders for all the 50 packages for transmission lines/substations have been issued and award of the packages are expected to be commenced from March, 2016 onwards. The work on the transmission lines/substations would be started after award of the packages. Land acquisition process is in progress for substations.</p>		

OUTCOME BUDGET 2016-17
Funds for Evaluation Studies and Consultancy

(Rs. in crore)

Sr. No.	Name of Scheme/ Programme	Objective /Outcome	Outlay 2016-17			Quantifiable Deliverables/ Physical Outputs	Processes/ Timelines	Projected Outcomes	Remarks/ risk Factors
			Non-Plan Budget	Plan Budget	Complementary Extra-Budgetary Resources				
1	2 Funds for Evaluation Studies & Consultancy	3 Evaluation of the projects sanctioned under Restructured Accelerated Power Development and Reforms Programme and other schemes/ programmes of Ministry of Power	4(i) -	4(ii) 0.01	4(iii) -	5 The evaluation of R-APDRP/ other schemes and programmes will bring out whether the programme is being implemented properly, desired results being achieved or not and suggesting changes in the programme for achieving the desired results.	6 .	7 Evaluation of schemes/ programmes will be completed on need basis.	8 Only a token provision has been proposed.
			Total	0.01					

**OUTCOME BUDGET 2016-17
Comprehensive Award Scheme**

(Rs. in crore)

Sl No	Name of Scheme/ Programme/ Project	Objective/Outcome	Outlay 2016-17			Quantifiable/ Physical Outputs	Projected Outcomes	Processes/Time-lines	Remarks/Risk factor
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources				
1	2	3	4	5	6	7	8		
			4 (i)	4 (ii)	4 (iii)				
	Comprehensive Award Scheme for power sector	To inculcate competitive spirit and to motivate higher level of efficient and economic operation in the field of construction operation and maintenance of thermal/hydro/ transmission projects, implementation of distribution reforms, rural distribution franchisees, environment performance, community development and safety records. However, the expected returns cannot be quantified.	-	0.54	-	Improvement in performance of generation, transmission distribution and environment management	To contribute in achieving reliable affordable and quality power supply to all	The awards for 2014-15 are to be given in a function to be held in March, 2016	The award Distribution Function for the year 2013-14 was held on 4 th June, 2015. The award Distribution Function for the year 2014-15 is proposed to be held in February-March 2016.

OUTCOME BUDGET 2016-17
POWER SYSTEM DEVELOPMENT FUND (PSDF)

(Rs. in crore)

Sl No	Name of Scheme/ Programme/ Project	Objective/Outcome	Outlay 2016-17 (Rs. in crore)			5 Quantifiable/ Physical Outputs	6 Projected Outcomes	7 Processes/Timelines	8 Remarks/Risk factor
			Non Plan Budget	Plan Budget (Rs in crore)	Complementary Extra Budgetary Resources				
1	2	3	4 (f)	4 (ii)	4 (iii)	5	6	7	8
i	PSDF	Power System Development Fund (PSDF) has been constituted with the approval of Cabinet. This Fund is to be utilized for funding of proposals related to safe operation of Grid like installation of protection system, renovation and modernisation (R&M) of transmission and distribution system for relieving congestion etc.	4 (f)	400	4 (iii)	PSDF is to be utilized for funding of proposals related to safe operation of Grid like installation of protection system, renovation and modernisation (R&M) of transmission and distribution system for relieving congestion etc.	The schemes would be improved network stability and security of grid at the state, regional and national level. This will improve Operational Reliability, Enhancement of System Security, Fast clearance of system faults and, Easy and accurate analysis of faults, reactive power management for efficient operation of the grid, etc.	As per guidelines/procedures for disbursement of funds from PSDF, first installment of the grant shall be disbursed to the entities after signing of the agreement and placement of necessary letter of award (LOA). There was inordinate delay by the entities in fulfilling the requirements for disbursement of funds by the entities.	22 schemes have been approved for funding from PSDF. As per the guidelines for disbursement of funds from PSDF, first installment of the grant shall be disbursed to the entities after signing of the agreement and placement of necessary letter of award (LOA). There was inordinate delay by the entities in fulfilling the requirements for disbursement of funds by the entities.
ii	Scheme for utilization of gas based generation capacity.	Make available Regasified Liquefied Natural Gas (RLNG) for improving utilization of the stranded gas based generation capacity. The increased gas based power generation from these stranded plants would have a multiplier effect on the economy and also help in restoring the investors' confidence in the power sector besides preventing these assets from becoming NPA.		1500		Increased gas based generation will help promote grid stability, mitigate the regional imbalance in power generation, ease the congestion in transmission corridors and provide the much needed balancing power for integrating renewable sources based power generation into grid, particularly in view of their fast ramp down and ramp up capability.	The gas based power plants will be required to indicated within the target PLF the additional power that would be generated (in MUs) and the support required per unit of generation (in Rs. per unit) from PSDF with a commitment that the net price to Discoms is not more than the target price or as decided. The stranded gas based power plants may also require financial relief from Banks/ financial institutions (FIs) so that they are above to meet their debt service obligations and do not become NPAs.	Round 3: Auction for the 3 rd Phase for the period of 1 st April 2016 to 30 th September 2016 of the scheme is under process in Ministry. Amount earmarked for the auction is 1600 crores. Round 4 of the scheme would 1 st October, 2016 to 31 st March, 2017. Amount earmarked for the auction is 2400 crores.	Additional amount of PSDF outgo will depend upon the bids received in the auction process and the change in RLNG prices. In case of fall in RLNG prices the outgo will further reduce.
		Total		1900					

OUTCOME BUDGET 2016-17
MOP Secretariat

(Rs. in crore)

Sl. No.	Name of Scheme/ Programme	Objective/ Outcome	Outlay 2016-17			Quantifiable Deliverables/ Physical Outputs	Processes/ Timelines	Projected Outcomes : Date of completion of the project	Remarks/ Risk Factor
			4(i) Non-Plan Budget	4(ii) Plan Budget	4(iii) Complementary Extra-Budgetary Resources				
1	2	3	4	5	6	7	8		
	(a) MOP Secretariat (Main):- Salary and other establishment expenditure including over-time allowance, medical treatment, domestic travel expenses, foreign travel expenses, publications, other administrative expenditure, Computerization & Office Automation advertising and publicity profession services and subsidies.	(a) To meet the salary and other incidental expenses for support services.	35.57	(a) The expenditure is incurred on salary and other support services and hence outputs are not measurable in quantitative/qualitative terms.		(a) Under these provisions, salary and other establishment expenses are met for all the officials of M/o Power. These are basically support services to facilitate personnel involved in framing overall policies and their implementation. Through various publications and publicity campaigns, the programmes, policy initiatives of the Ministry are disseminated to the general public in an effective manner.			

OUTCOME BUDGET 2016-17
CENTRAL ELECTRICITY REGULATORY COMMISSION

(Rs. in crore)

S. No.	Name of Scheme/ Programme	Objective/ Outcome	Outlay 2016-17			Quantifiable deliverables/ physical outputs	Projected Outcomes	Processes/ Timeline	Remarks/Risk Factors
			4(i) Non-Plan Budget	4(ii) Plan Budget	4(iii) Complementary Extra-Budgetary Resources				
1	2	3	4			5	6	7	8
1	Central Electricity Regulatory Commission		55.50*	Nil		300 Petitions are likely to be disposed during the year 2016-17. The petitions include the tariff petitions for the Tariff period 2009-14 and 2014-19, applications for grant of transmission & trading licenses, adoption of tariff arrived through the process of competitive bidding, miscellaneous cases involving grid disciplines and monitoring the functioning of the Power Exchanges and adjudication matters.	Passing of tariff orders will result in firm tariff for the 5 years Tariff Period for which the Terms & conditions of Tariff have been specified by CERC. Better grid management/load-generation balance. This is aimed at ensuring secure and reliable operation of the grid. This would promote effective utilization of assets across the country and development of the new transmission capacities.	The procedures of framing Regulation as also of passing orders by CERC are already laid down in detail in the Conduct of Business Regulations. These procedures would be followed while disposing of the petitions and other issues highlighted in column-5. The targets as indicated in column-5 are expected to be achieved during the year 2016-17.	As per the past trend, it is expected that the targets set will be achieved. However, the possible constraints which have the potential of slippages on time line include the complexities involved in some cases.

OUTCOME BUDGET 2016-17 APPELLATE TRIBUNAL FOR ELECTRICITY

(Rs. in crore)

Sl. No.	Name of Scheme/ Program	Objective/ Outcome	Outlay 2016-17			Quantifiable Deliverables/ Physical outputs	Projected Outcome	Processes/ Timelines	Remarks/ Risk Factors
			Non-Plan Budget	Plan Budget	Complementary extra-budgetary Resources				
1	2	3	4	5	6	7	8		
	Appellate Tribunal for Electricity	To facilitate expeditious resolution of disputes in the power sector at the appellate level Further, the Tribunal will also function as Appellate authority for under Petroleum and Natural Gas Regulatory Board Act.	4(i) 10.97	4(ii) 0	4(iii) 0	Total number of appeals pending for final disposals as on 1 st January, 2016 is 428. Apart from this, 404 IAs/ Petitions etc. are also pending for disposal/ admission. These are likely to be disposed off along with fresh appeals/ IAs/ Petitions being filed during 2016-17. The above details are inclusive of cases under the Petroleum and Natural Gas Regulatory Board Act.	N.A.	Spread throughout the year	Some cases are pending due to the complexities and lengthy nature of issues etc.

OUTCOME BUDGET 2016-17
Setting up of Joint JERC for UTs & Goa

(Rs. in crore)

Sl. No	Name of Scheme/ Programme	Objective / Outcome	Outlay 2016-17			Quantifiable Deliverable/ Physical Outputs	Projected Outcomes	Process/ Timelines	Remarks / Risk Factor
1	2	3	4			5	6	7	8
			4(i) Non-Plan Budget	4(ii) Plan Budget	4(iii) Complementary Extra Budgetary Resources				
	Joint Electricity Regulatory Commission for State of Goa & UTs	To meet the statutory requirement for setting up Joint Electricity Regulatory Commission as per the Electricity Act 2003	6.81	NIL	NIL	The Commission would regulate Tariff for supply of electricity in the state of Goa & UTs except Delhi resulting in efficiency improvements.	7 retail tariff orders, one generation tariff order and one transmission order are expected to be issued by the Commission for control period financial year 2017-18 to 2019-20, subject to filing of Multi-Year Tariff petitions.	Tariff order is to be issued within 120 days of receipt of ARR petition.	

Chapter – III

Major Initiatives/Reforms & Policy Measures

Power sector is important not only because it impacts the quality of life of population but also the growth and development of other sectors such as industry, agriculture, transport, health and education. Government of India has taken a number of policy initiatives which are expected to increase investment in power sector and attract private investors as well. Some of the major initiatives and policy reforms are as given below: -

A) Power Generation Sector

i) Accelerated Capacity Addition Programme:

The Government is consistently working towards fulfilling the commitment made in the National Electricity Plan (NEP) to meet the demand for power and eliminating both peaking and energy shortages. Capacity Addition of 54,964 MW was achieved during XI Plan, as against the target of 62,374 MW fixed by Niti Aayog during the Mid-Term Appraisal (MTA) of XI Plan. For the XII Plan a Capacity Addition Target of 88,537 MW has been fixed by Niti Aayog.

A Capacity Addition of 20,622.8 MW was achieved against the target of 17,956.3 MW for the year 2012-13. A Capacity Addition of 17,825.1 MW was achieved against the target of 18,432.3 MW for the year 2013-14. A Capacity Addition of 22,566.3 MW was achieved against the target of 17,830.3 MW for the year 2014-15. This exceeds the highest capacity addition ever in a single year of 20622.8 MW achieved in 2012-13.

A capacity addition target of 20,037.1 MW including 1,000 MW of nuclear power was fixed for the year 2015-16. A capacity of 13521.6 MW has been achieved till 31st Jan 2016. The cumulative capacity addition during the 12th plan is 74536 MW as on 31st January 2016. which constitutes 84% of the target envisaged in the 12th Plan.

(ii) Ultra Mega Power Projects

The Government of India had launched an initiative for the development of coal-based Ultra Mega Power Projects (UMPPs), each with a capacity of 4,000 MW. The objective behind the initiative is to ensure cheaper tariff utilizing economies of scale, catering to the needs of number of States and to mitigate the risk relating to tie up of land, fuel, water and other statutory clearances etc. The projects are awarded to the successful developers through tariff based competitive bidding route. To tie-up necessary inputs and clearances, such as, provision of site, fuel through captive mining blocks, water and in- principle environment and forest clearances, project-

specific shell companies (SPVs) are set up as wholly owned subsidiaries of the Power Finance Corporation (PFC) Ltd – the nodal agency for these projects. These SPVs, alongwith the various clearances etc. are subsequently transferred to the successful developers.

Targets and Achievements

Four Ultra Mega Power Projects i.e. Sasan in Madhya Pradesh, Mundra in Gujarat, Krishnapatnam in Andhra Pradesh and Tilaiya in Jharkhand have already been transferred to the identified developers. Mundra UMPP (5x800 MW) and Sasan UMPP (6x660 MW) are fully commissioned and are operational.

The Ministry of Power had tentatively identified following five UMPPs for bidding:

- i) Cheyyur UMPP, Tamil Nadu.
- ii) Bedabahal UMPP, Odisha.
- iii) Bihar UMPP.
- iv) Deoghar UMPP, Jharkhand.
- v) Tilaiya UMPP, Jharkhand. (rebid)

Bid process for Bedabahal UMPP and Cheyyur UMPP would be initiated after revision of Standard Bidding Documents (SBDs), which is expected shortly.

MoP is taking up with MoC for final allocation of coal blocks for Bihar and Deoghar UMPP. Bihar Govt. has communicated its consent for setting up of the 4000 MW Bihar UMPP in Banka District and allocation of 2000 MW from this project to the state of Bihar. Based on the consent received from respective procurers (state governments), final allocation of power will be done.

Ministry of Power also proposes to re-bid Tilaiya UMPP, Jharkhand as the developer has issued termination notice.

Ministry of Power is making best of efforts for bidding out three Ultra Mega Power Projects (UMPPs) namely Cheyyur UMPP, Tamil Nadu, Bedabahal UMPP, Odisha and Bihar UMPP in this Financial Year which would attract an investment of approx. Rs 90,000 crore. Deoghar UMPP and Tilaiya UMPP, Jharkhand may be bid out in the next financial year, after due process is met, attracting further investment of about Rs.60,000 crore.

(iii) Coal Supply for Thermal Power Projects:

To make coal available to Thermal Power Projects after the cancellation of 204 coal blocks by Hon'ble Supreme Court, Govt. of India has allotted 47 coal blocks so far to power sector which can sustain a capacity of about 50,000 MW. It is expected that

once the auction/allotment of the entire 204 coal blocks cancelled by the Hon'ble Supreme Court in the next phases is complete, most of the issues of fuel shortage in coal based thermal power plants will be resolved.

To make coal available to power projects, Ministry of Coal on 30.06.2015 has decided that "the coal supply may be continued on "MoU best effort basis" on the same terms and conditions as at present till 31.03.2016 or until a policy is formulated, whichever is earlier, for plants having long-term PPAs and that are already commissioned or to be commissioned in 2015-16. Further, to make coal available for those power plants which are stressed or in short supply of coal for the reason they do not have coal block or linkage or do not have long term PPAs, a separate quantity within the e-auction quantity may be earmarked for power sector. To begin with, e-auction may be conducted separately for PPA holders (long and medium term) by offering a quantity of 5 MT and for other (short-term PPAs/ without PPA) offering a quantity of 5 MT". E-Auction of 10 MT coal has been held so far.

(iv) Replacing old units with efficient bigger size new units:

To convert/transfer coal linkage of old retiring units to new efficient units, it has been decided that Letter of Assurance (LoA) / linkage granted to the old plant shall be automatically transferred to the new plant of nearest supercritical capacity. If the capacity of the new supercritical plant is higher than the old plant, additional coal may be accorded priority subject to the availability of coal on the best effort basis from CIL. The old plant shall continue to operate till the CoD of new plant.

Further, CEA has conducted a study on replacing old in-efficient units with supercritical units and has brought out that 5228 MW can be potentially retired with replacement of 10180 MW of supercritical units.

(B) Power Transmission Sector

(i) National Grid

Generation capacities and demand points are unevenly distributed across the country due to various natural and historical factors. Furthermore, demand for power, (and to some extent, even its supply), is characterized by intra-day and seasonal variations. An integrated power transmission grid helps in evening out supply-demand mismatches.

The existing inter-regional transmission capacity of the National grid stands at about 55,350 MW till 31st December 2015, as against 44,250 MW till 31st Dec 2014.

(II) Private sector participation in Transmission

Government of India has taken a number of policy initiatives which are expected to increase power generation through investments in public as well as private sectors. Some of the major initiatives are given below:

- (i) Enactment of new Electricity Act,2003.
- (ii) De-licensing of thermal generation.
- (iii) Structural reforms for State Electricity Board.
- (iv) Formation of Central & State Regulatory Commissions.
- (v) Formation of National Grid.
- (vi) Open access in Transmission & Distribution.
- (vii) Power Trading being recognized as a distinct activity.
- (viii) Accelerated Power Development & Reforms Programme.
- (ix) Reduction in T &D losses.
- (x) Further captive generation being freely permitted.
- (xi) Issue of guidelines for competitive bidding for procurement of Power by distribution licensees under the Electricity Act.
- (xii) Notification of Tariff Policy.
- (xiii) Notification of National Electricity Policy.

(iii) Leh-Kargil Transmission Line

To improve power supply in the Leh-Kargil region and connect the Ladakh Region to the National Grid, the Govt is constructing a transmission system from Srinagar to Leh. This would ensure year-round availability of power to the Ladakh region. During FY 2015-16 a provision of Rs. 250.00 crore was made and the same was released to Power Grid Corporation of India Limited, implementation agency of this project.

(iv) Comprehensive Scheme for strengthening of Transmission and Distribution in Arunachal Pradesh and Sikkim

The scheme is conceived for the development of Intra-state transmission and distribution in Arunachal Pradesh and Sikkim and is being implemented through Power Grid Corporation of India (PGCIL), which is a Central Transmission Utility of the country, under Central Sector Plan Scheme of Ministry of Power. The scheme is envisaged to be commissioned in 48 months i.e. by December, 2018. During the year 2015-16 a budgetary support of Rs.150 crore was provided and the entire amount has been released.

(v) Power System Improvement in North Eastern States (excluding Arunachal Pradesh & Sikkim) for strengthening of intra-State transmission and

Distribution network

The scheme was conceived for strengthening of the Intra State Transmission and Distribution System for six States (Assam, Manipur, Meghalaya, Mizoram, Tripura and Nagaland). The scheme is being implemented by Power Grid Corporation of India (PGCIL), being a Central Transmission Utility of the country, under Central Sector Plan Scheme of Ministry of Power with the assistance of World Bank loan and the budget of Ministry of Power on 50:50 basis except the component of capacity building for Rs.89 crore for which Gol will bear entirely. The scheme is envisaged to be commissioned in 48 months i.e. by December, 2018. During the year 2015-16 a budgetary support of Rs.250 crore was provided and a sum of Rs. 158.50 crore has been released till 29th Feb 2016.

(C) Distribution Sector

(i) Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY):

Government of India has approved scheme “Deendayal Upadhyaya Gram Jyoti Yojana” (DDUGJY) vide OM dated 3rd Dec’ 2014. The erstwhile Rajiv Gandhi Grammen Vidyutikaran Yojana (RGGVY) has been subsumed under DDUGJY Scheme as rural electrification component.

Under the scheme, 60% of the Project cost is extended by Govt. of India as Grant in respect of States other than special category (85% for the Special Category States i.e. all North Eastern States including Sikkim, J&K, Himachal Pradesh, Uttarakhand). Minimum 10% (5% for Special Category States) shall be contributed through own sources by the State Govt./State Power Utility and the balance 30% (10% for Special Category States) may be arranged through Loan or own sources by the State Govt./ State Power Utility. Additional grant upto 15% (5% in case of Special Category States) by conversion of 50% of loan component will be provided by Govt. of India on achievement of prescribed milestones such as timely completion, reduction in AT&C losses & upfront release of revenue subsidy by State Govt. The following components have been prescribed under the DDUGJY scheme:

- (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) stand subsumed under DDUGVY. The outlay of RGGVY scheme for 12th and 13th Plans shall be carried forward under DDUGJY.

The scheme would be a significant facilitator in achieving the goal of 'Power for All'.

(ii) Integrated Power Development Scheme (IPDS):

CCEA on 20.11.2014 approved the "Integrated Power Development Scheme" (IPDS) with a total outlay of Rs.32,612 crore which include a budgetary support of Rs.25,354 crore from Government of India. The objective of scheme are to strengthening of sub-transmission and distribution networks in the urban areas; metering of distribution feeders/transformers/consumers in the urban; provisioning of Solar Panel; and IT enablement of distribution sector and strengthening of distribution network being undertaken under R-APDRP.

The scheme will be implemented within five years in 12th and 13th Plan in cooperation with the DISCOMS and the State Governments and will facilitate 24x7 reliable and adequate power supply in the urban areas. The scheme will also help in reduction in AT&C losses; establishment of IT enabled energy accounting/auditing system, improvement in billed energy based on metered consumption and improvement in collection efficiency.

Funding pattern :

Government of India	:	60% (85% for special category States)
Discoms	:	10% (5% for special category States)
Loan from FIs	:	30% (10% for special category States).

Additional grant equivalent to 50% of loan component (i.e. 15%, 5% for special category States) will also be provided subject to milestones).

Power Finance Corporation (PFC) will be the Nodal Agency for operationalization of the scheme. All Discoms including private sector Discoms and State Power Departments are eligible for financial assistance under the scheme.

The Restructured APDRP (R-APDRP) was approved as central sector scheme on 31.07.2008 with total outlay of Rs.51,577 crore. The focus of the programme is on actual demonstrable performance in terms of AT&C loss reduction. The scheme comprises of two parts-Part-A & Part-B. Part-A of the scheme being dedicated to establishment of IT enabled system for achieving reliable & verifiable baseline data system in all towns with population greater than 30,000as per 2001 census (10,000 for Special Category States). Private distribution utilities are not covered under the programme.

R-APDRP also has provision for Capacity Building of Utility personnel and development of franchises through Part-C of the scheme. Few pilot projects adopting innovations are also envisaged under Part-C.

Under Part-A (IT enabled system) , projects worth Rs. 5427.24 crore for 1409 towns, 72 Part-A(SCADA) projects worth Rs.1556.23 crore and 1258 Part-B projects worth Rs.32214.45 crore have been sanctioned till 31.12.2015” Further, under IPDS , projects worth Rs.24,205 crore have been sanctioned for 3406 towns in 26 states/ UTs (including in-principle sanction of Rs. 19,071 crore for 3044 towns.

(iii) Power System Development Fund (PSDF) scheme

PSDF Scheme has been approved by the Cabinet in the Financial Year 2014-15. The original scope of scheme envisages strengthening of existing distribution and transmission infrastructure by part funding through Grants. The scope of the Scheme was enhanced to provide assistance in the form of subsidy to Discoms for procuring power from Stranded Gas based power plants in March 2015.

(iv) National Electricity Fund (Interest Subsidy) Scheme

Government of India has approved setting up of National Electricity Fund (Interest Subsidy Scheme) to provide interest subsidy aggregating to Rs.8,466 crore on loan disbursements against the distribution projects amounting to Rs. 25,000 crore approved during FY 2012-13 & 2013-14 to the State Power Utilities both in public and private sector, to improve the distribution network.

Under the scheme, interest subsidy is to be provided on loan taken by public and private power utilities in distribution sector. The pre- conditions for eligibility are linked with reform measures taken by the states and the amount of interest subsidy is linked to progress achieved in reforms linked parameters (i.e. AT&C loss reduction, Reduction in revenue GAP etc). For availing interest subsidy under NEF (Interest Subsidy scheme), the states have been categorized as “Special Category & Focused States” and “States other than Special Category & Focused States”. Rural Electrification Corporation Ltd., (REC) had been designated as the Nodal Agency to operationalize the programme under the guidance of Steering Committee constituted for the scheme.

NEF Steering Committee during the Financial Year 2012-13 & 2013-14 has approved 1009 projects of 25 Discoms from 15 States with loan component of Rs.26,406 crore for coverage under NEF.

Interest Subsidy amounting to Rs.7.51cr has so far been released.

(D) Distribution Sector Reform

Scheme for Financial Restructuring of State Owned Discoms :

A scheme for Financial Restructuring of State Owned Discoms was formulated and approved by the Government (October 2012) keeping in view of the declining operational performance and financial health of State Discoms and to enable the turnaround of the State Discoms and ensure their long term viability, which have accumulated huge

losses and unsustainable debt. The scheme contains measures to be taken by the State Discoms and State Government for achieving financial turnaround by restructuring their debt with support through a Transitional Finance Mechanism by Central Government.

So far, none of the participating States could fulfill conditionalities as envisaged in FRP Scheme. Hence incentive of Capital Reimbursement Support could not be availed by any State.

(c) Power for All

Power for All (24x7 PFA) is a joint initiative of the Government of India (GoI) and State Governments, aiming to achieve 24X7 availability of reliable power to all households, industrial, commercial and all other electricity consuming entities by 2019-20. The Government of India has taken joint initiatives with the States to prepare State Specific Action Plan for the States/UTs for providing 24x7 Power to all consumers. State Specific Documents for the States of Andhra Pradesh, Assam, Bihar, Chattisgarh, Goa, Jharkhand, Meghalaya, Rajasthan, Telangana and Uttarakhand have been prepared.

(d) UDAY (Ujwal DISCOM Assurance Yojana)

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

To improve the situation, a Scheme “UDAY” (Ujwal DISCOM Assurance Yojana) for financial turnaround of Power Distribution Companies has been formulated and launched by the Government on 20th November, 2015 in consultation with the various stakeholders for the financial and operational turnaround of DISCOMs and to ensure a sustainable permanent solution to the problem.

The Highlights of the Scheme are:

- The scheme provides permanent solutions to legacy debts of approximately Rs 4.3 lakh crores (by FY 2014-15) and address potential future losses.
- Empowers DISCOMs with the opportunity to break even in the next 2-3 years through four initiatives
- Operational efficiency improvements viz. compulsory smart metering, up-gradation of transformers, meters etc., energy efficiency measures like efficient LED bulbs, agricultural pumps, fans & air-conditioners etc. to reduce the

average AT&C loss from around 22% to 15%; Elimination of the gap between ACS and ARR by 2018-19.

- Reduction in cost of power through measures such as increased supply of cheaper domestic coal, coal linkage rationalization, liberal coal swaps from inefficient to efficient plants, coal price rationalization based on GCV, supply of washed and crushed coal, and faster completion of transmission lines.
- Financial turnaround through States taking over 75% of DISCOM debt as on 30th Sept, 2015 over two years
 - ❑ 50% of DISCOM debt to be taken over in 2015-16 and 25% in 2016-17 – reduction of the interest cost on the debt taken over by the States to around 8-9%, from as high as 14-15%.
 - ❑ DISCOM debt not taken over by the State shall be converted by the Banks / FIs into loans or bonds with interest rate not more than the bank's base rate plus 0.1%. Alternately, this debt may be fully or partly issued by the DISCOM as State guaranteed DISCOM bonds at the prevailing market rates which shall be equal to or less than bank base rate plus 0.1%.
 - ❑ Further provisions for spreading the financial burden on States over three years to give flexibility in managing interest payment within their fiscal place in initial years.
- Provision for incentives/ disincentives for future financial performance for participating states
 - ❑ States to take over and fund at least 50% of the future losses (if any) of DISCOMs in a graded manner.
 - ❑ State DISCOMs to comply with the Renewable Purchase Obligation (RPO) outstanding since 1st April, 2012
 - ❑ States accepting UDAY and performing as per operational milestones will be given additional / priority funding through DDUGJY, IPDS and PSDF or other such schemes of Ministry of Power and Ministry of New and Renewable Energy.
 - ❑ Such States shall also be supported with additional coal at notified prices and, in case of availability through higher capacity utilization, low cost power from NTPC and other Central Public Sector Undertakings (CPSUs).
 - ❑ States not meeting operational milestones will be liable to forfeit their claim on IPDS and DDUGJY grants.

So far 17 States have given their consent to join the Scheme UDAY and 06 States

out of these have signed the Memorandum of Understanding with the Ministry of Power.

(E) Energy Efficiency

Energy Conservation Schemes (MOP)

National Mission for Enhanced Energy Efficiency (NMEEE)

The Mission, by 2018-19, is likely to achieve about 15.04 million tons oil-equivalent of fuel savings – in coal, gas, and petroleum products, along with an expected avoided capacity addition of over 4,000 MW.

NMEEE has the following components: -

- a) **Perform, Achieve and Trade (PAT):** A market based mechanism to enhance cost effectiveness of improvements in energy efficiency in energy-intensive large industries and to save 15 mtoe by year 2018-19. The trading of energy saving certificates would facilitate this process. 478 Designated Consumers (DCs) in 8 industrial sectors have been identified and notified for the mandatory participation in the 1st cycle of PAT scheme to be implemented during 2012-13 to 2014-15, and estimated saving of 6.686 MTOE, has been targeted in 3 years from these energy intensive industries. For the PAT cycle II, three new sectors have been notified namely Railways, Refineries and DISCOMs.
- b) **Market Transformation for Energy Efficiency (MTEE):** - Accelerating the shift to energy efficient appliances in designated sectors through innovative measures to make the products more affordable, the Super-efficient equipment programme for ceiling fans has been initiated and under which seven fan manufacturers have been selected for the production and sale of super-efficient fans in the Indian market through a competitive bidding process.
- c) **Energy Efficiency Financing Platform (EEFP):** Creation of platform to promote finances for energy efficiency projects in all sectors by capturing future energy savings.
- d) **Framework for Energy Efficient Economic Development (FEEED):** This initiative seeks to develop fiscal instruments to promote energy efficiency including innovative fiscal instruments and policy measures like the Partial Risk Guarantee Fund for Energy Efficiency (PRGFEE) and Venture Capital Fund for Energy Efficiency (VCFEE), Public Procurement of energy efficiency goods and services, utility-based Demand Side Management (DSM), etc.

(F) Electricity Act and Policy

(i) Amendments proposed in the Electricity Act, 2003

Based on the experience gained over the last ten years and to accommodate

the recent developments in the areas of grid stability and security development of market and progress in technology, Ministry finalized draft amendments to the Electricity Act, 2003 taking into consideration the recommendations of Working Group on Power for 12th Plan and recommendations of the Committee set up under the Chairperson, Central Electricity Authority. These amendments are expected to bring about further improvement in grid security, improvement in the efficiency of distribution sector through separation of carriage and content, rationalization of tariff, dynamic and responsible regulatory framework with the overall objective of sustainable growth of the sector aimed at consumer benefits.

The Union Cabinet had approved the proposal for amendment in Electricity Act, 2003 on 10th December, 2014 as contained in the Electricity (Amendment) Bill 2014. The Electricity (Amendment) Bill, 2014 was introduced in the Lok Sabha on 19.12.2014. The Bill was subsequently referred to the Standing Committee on Energy for examination and report. The Committee submitted its report on 7.5.2015.

Based on the observations/recommendations of the Standing Committee on Energy and further consultation/deliberations with State Governments and various other stakeholders, further changes proposed in the Electricity (Amendment) Bill, 2014 are under finalization.

(ii) Amendment in the Tariff Policy

The Tariff Policy was notified by the Central Government under section 3 of the Electricity Act, 2003 on 6th January, 2006. It was amended from time to time in the past on 31st March, 2008, 20th January, 2011 and 8th July, 2011. Based on the Working Group Report on 12th Five Year Plan as well as further consultation with stakeholders, a comprehensive amendment in the Tariff Policy has been carried out. The amendments inter alia includes promotion of renewable energy (Renewable Generation Obligation, Long term growth trajectory of RPOs and increase in Solar RPO), compulsory procurement of power by Discoms from Waste to Energy plants, mandatory use of sewage treated water by thermal plants, continuation of exemption to hydro projects from tariff based competitive bidding upto 2022, Smart Meters, recovery of Regulatory Assets, revision of formula for calculation of Cross Subsidy etc.

The amendments in the Tariff Policy will ensure availability of electricity to consumers at reasonable and competitive rates, ensure financial viability of the sector and attract investments, promote transparency, consistency and predictability in regulatory approaches across jurisdictions.

The Union Cabinet on 20.1.2016 has approved the proposal for amendments in the Tariff Policy. Thereafter, the Resolution on Tariff Policy has been published in Gazette of India on 28.1.2016.

Short Term Power Trading and Power Exchanges

a) Electricity Transacted through Trading Licensees

The Central Electricity Regulatory Commission (CERC) has powers to grant Inter-State Trading Licenses. The Commission has so far granted 74 inter-state trading licenses, of which 44 are in existence. Out of these, 25 trading licensees have been undertaking trading in electricity as on 31.12.2015. The volume, price and trading margin of the electricity traded by these licensed inter-state traders are as under:

Period	Volume of Electricity transacted through Trading licensees (Billion Units)	Average Price of Electricity Traded through Trading Licensees (₹/kWh)
2009-10	26.72	5.26
2010-11	27.7	4.79
2011-12	35.84	4.18
2012-13	36.12	4.33
2013-14	35.11	4.29
2014-15	34.56	4.28
2015-16 (upto Dec 2015)	27.12	4.16

As per the CERC (Fixation of Trading Margin) Regulations, 2010, the trading licensees are allowed to charge trading margin up to 7 paise/kWh in case the sale price exceeds ₹3/kWh, and 4 paise/kWh where the sale price is less than or equal to ₹3/kWh. This margin includes all charges, except the charges for the scheduled electricity, open access and transmission losses. The trading margin is charged on the scheduled quantum of electricity.

b) Electricity Transacted through Power Exchanges

There are two power exchanges operating in the country namely the Indian Energy Exchange Ltd. (IEX), New Delhi and Power Exchange India Ltd. (PXIL), Mumbai.

These are electronic platforms where price discovery happens through anonymous competitive bidding. The power prices in this platform reflect the demand and supply in the short term. The various products traded in the exchanges are day-ahead contracts, daily contracts, weekly contracts, intra-day contracts, day-ahead contingency contracts (including 24X7 intraday/contingency contracts on trial basis introduced in July 2015) and renewable energy certificates. Power exchanges have also provided an impetus to open access. More than 3000 open access consumers are using the power exchange for purchase of power regularly now. These open access consumers set is constituted by captive power plants, industrial consumers, independent power producers, ISGS/CGS, private distribution licensees, state utilities etc.

Volume and Price of Electricity Transacted through Power Exchanges (IEX & PXIL)		
Year	Volume of Electricity transacted (Billion Units)	Price of Electricity Transacted through Power Exchanges (₹/KWh)
2009-10	7.19	4.96
2010-11	15.52	3.47
2011-12	15.54	3.57
2012-13	23.54	3.67
2013-14	30.67	2.90
2014-15	29.40	3.50
2015-16 (upto Dec 2015)	26.14	2.81

Chapter – IV

Review of Performance & Highlights of Schemes & Projects

This Chapter highlights the work done and achievements against the various projects and schemes of the Ministry of Power under the following headings:-

- (a) **Public Sector Undertakings** viz. NTPC, NHPC, PGCIL, THDC, SJVNL and NEEPCO
- (b) **Statutory Authorities** – Central Electricity Authority, Forum of Regulators (FOR).
- (c) **Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY)**
- (d) **Integrated Power Development Scheme (IPDS)**
- (e) **Conservation & Energy Efficiency**
- (f) **Strengthening of Power Systems – Covering Schemes of** Smart Grid, Green Energy Corridor, National Electricity Fund, Financial Support for Debt re-structuring of DISCOMS, Power System Operation Company (POSOCO), 220 KV Transmission Line from Srinagar to Leh via Kargil, Power System Improvement in North Eastern States excluding Arunachal Pradesh and Sikkim, Strengthening of Transmission Systems in the States of Arunachal Pradesh and Sikkim, Funds for Evaluation Studies Consultancy and Comprehensive Award Scheme for Power Sector.
- (g) **Power System Development Fund (PSDF)**
- (h) **MoP Secretariat**

The performance of the schemes and projects implemented by CPRI, NPTI, APTEL, CERC, BEE, EC, JERC and DVC are given in **Chapter-VI** hence not included in this chapter.

2. Salient features and performance highlights of the main schemes are as under:-

- (a) The Public Sector Undertakings had taken forward the implementation of a number of projects with the budgetary support as well as their own Internal and Extra Budgetary Resources. The progress of work done /outcome upto 31.12.2015 vis-à-vis outlay for 2015-16 in respect of **NTPC, NHPC, PGCIL, THDC, SJVNL and NEEPCO are given at Annexure-I, II, III, IV, V, V and VI respectively.**

(b) Statutory Authorities

The schemes/ programmes/ projects in respect of Central Electricity Authority and Forum of Regulators are included under this heading. The quantifiable deliverable/physical outputs and the achievements for 2015-16 upto 31.12.2015 are given in **Annexure-VII and Annexure - VIII** respectively.

(c) Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) has the following components:

- (i) Separation of agriculture and non-agriculture feeders facilitating judicious rostering of supply to agricultural & non-agricultural consumers in the rural areas; and
- (ii) Strengthening and augmentation of sub-transmission & distribution infrastructure in rural area, including metering of distribution transformers/feeders/consumers;
- (iii) Rural electrification for completion of the targets laid down under the erstwhile Rajiv Gandhi Grammen Vidyutikaran Yojana (RGGVY) for 12th and 13th Plans.

The cumulative achievement under the scheme as on 31.12.2015 are electrification of 112275 un-electrified villages, Intensive electrification of 333858 villages and release of electricity connections to 228.31 Lakhs BPL households. During 2015-16 (up to 31.12.2015), electrification of 3541 Un-electrified villages, intensive electrification of 21506 already electrified villages and release of electricity connections to 10.45 lakh BPL connection have been completed. Under DDUGJY, projects amounting to Rs. 41100.45 crore have been sanctioned in 29 States/UTs. The details are at **Annexure-IX**

(d) Integrated Power Development Scheme (IPDS) has the following components:-

- (i) Strengthening of sub-transmission and distribution networks in the urban areas;
- (ii) Metering of distribution transformers/feeders/consumers in the urban areas;
- (ii) IT enablement of distribution sector and strengthening of distribution network for completion of the targets laid down under erstwhile R-APDRP for 12th and 13th Plans.

Under Part-A (IT enabled system) of the erstwhile R-APDRP programme which has since been subsumed in this scheme, projects worth Rs.5,427.24 crore for 1409 towns, 72 Part-A (SCADA) projects worth Rs.1,556.23 crore and 1,258 Part-B projects worth Rs.32,214.45 crore have been sanctioned till 31.12.2015". Further, under IPDS , projects worth Rs.24,205 crore have been sanctioned for 3406 towns in 26 states/UTs.

The achievement up to December, 2015 is given in the **Annexure-X**.

- (e) **Conservation & Energy Efficiency – The highlights of** Bureau of Energy Efficiency and Energy Conservation are included under this head.
- (i) **Smart Grid** - Guidelines for implementation of NSGM was issued on 18th November,2015. NSGM committees [**Governing Council** headed by the Minister of Power, **Empowered Committee** headed by Secretary (Power) and **Technical Committee** headed by Chairperson (CEA)] have also been constituted on 1st June 2015. Budget allocation for FY 2015-16 for NSGM activities is Rs 40 crore. The details are given at **Annexure-XIII**.
 - (ii) Interest Subsidy to National Electricity Fund – Government of India has approved setting up of National Electricity Fund (Interest Subsidy Scheme) to provide interest subsidy on loan disbursements against the distribution projects to the State Power Utilities both in public and private sector, to improve the distribution network. **As the scheme’s implementation depends on the State Govts/Discoms complying with a number of conditions , the progress has not been on expected lines.** The details of achievements are at **Annexure-XIV**.
 - (iii) Financial Support for Debt re-structuring of DISCOMS – The objective of the scheme is to ensure the financial viability of State Owned Discoms. **As the scheme’s implementation depends on the State Govts/Discoms complying with a number of conditions , the progress has not been on expected lines.** The details are at **Annexure-XV**.
 - (iv) 220 KV Transmission Line from Srinagar to Leh via Kargil, Power System Improvement in North Eastern States excluding Arunachal Pradesh and Sikkim, Strengthening of Transmission Systems in the States of Arunachal Pradesh and Sikkim are the Transmission Schemes. The achievements of these Schemes are enumerated in **Annexure-XVI**.
 - (v) Funds for evaluation studies/ Consultancy and Comprehensive Award Scheme for Power Sector. These are small schemes grouped under the heading of ‘Development of Power Systems’. No concrete proposal evolved under the scheme of evaluation studies/ consultancy. Details of work done in respect of Comprehensive Award Scheme are given in **Annexure-XVII**.
- (f) **Power System Development Fund (PSDF)** – This Fund is to be utilized for funding of proposals related to safe operation of Grid like installation of protection system, renovation and modernisation (R&M) of transmission and distribution system for relieving congestion etc. Another component of PSDF is to make available Regasified Liquefied Natural Gas (RLNG) for improving utilization of the stranded gas based generation capacity. The details are at **Annexure-XVIII**
- (g) **MOP Secretariat** – Under this scheme, there was a plan component of computerization and office expenses. During 2016-17, this component has been moved to non-plan side. The details are at **Annexure-XIX**.

(3) Generation & capacity addition

3.1 XII-Plan Targets and Achievements

Sector-wise Details

(Figures in MW)

Sector	XII Plan		2015-16	
	Target	Achievement	Target	Achievement (Upto 31.12.2015)
Central	26,182	14,016.52	3696.10	1650.00
State	15,530	15,201.10	8695.00	2980.00
Private	46,825	43,022.50	7646.00	6596.00
Total	88,537	72,240.12	20,037.10	11,226.00

3.2 The generation upto 31.12.2015 vis-a-vis Targets for 2015-16 of the following CPSUs are as under:-

Sl. No.	CPSU	Generation Target (MU)	Generation upto 31.12.2015 (MU)
1.	NTPC Ltd.	240676.00	180087.29
2.	NHPC Ltd.	21190.00	20394.19
3.	NEEPCO	4764.00	4087.90
4.	SJVN Ltd.	8000.00	8514.80
5.	THDC India Ltd.	3952.00	3404.74

NTPC Achievements upto 31.12.2015

(Rs. in crore)

Sl. No.	Name of Scheme / Programme/ Project	Objective/ Outcome	Outlay 2015-16		Quantifiable Deliverables/Physical Milestones	Processes / Timelines	Achievements wrt col 5	Remarks
			4(i) Plan Budget (RE 2015-16)	4(ii) Act Exp upto Dec'15				
1	2	3			5	6	7	8
	Ongoing Schemes							
1	Koldam, HP	Addition of 800 MW of generation capacity	299.16	141.08	Commissioning of U#3	Jun'15	Apr'15 (A)	
					Commissioning of U#4	Jun'15	Jun'15 (A)	
2	Barh-I, Bihar	Addition of 1980 MW of generation Capacity	996.20	561.74	U#2 Commencement of Lub Oil flushing	Feb'16		Ant. by Feb'17
3	Tapovan-Vishnugad, Uttarakhand	Addition of 520 MW of generation capacity	376.61	243.93	Completion of Barrage Raft and Piers up to 3m height along with re-diversion of river along the original course	Feb'16	Feb'16 (A)	
					Pressure shaft #1 & #2 excavation completion and 300 m liner erection	Feb'16	Jan'16 (A)	
4	Bongaigaon, Assam	Addition of 750 MW of generation Capacity	657.83	485.21	U#2 CW system readiness	Nov'15	Oct'15 (A)	
					U#3 TG Deck Casting completion	Dec'15		Ant. in Mar'16
					Commissioning of U#2	Mar'16		Ant. in Oct'16
5	Barh-II, Bihar	Addition of 1320 MW of generation Capacity	548.23	282.73	-	-	Mar'15 (A)	

Sl. No.	Name of Scheme / Programme/ Project	Objective/ Outcome	Outlay 2015-16		Quantifiable Deliverables/Physical Milestones	Processes / Timelines	Achievements wrt col 5	Remarks
			4(i) Plan Budget (RE 2015-16)	4(ii) Act Exp upto Dec'15				
1	2	3	4(i)	4(ii)	5	6	7	8
			Plan Budget (RE 2015-16)	Act Exp upto Dec'15				
6	Singrauli Small hydro, UP	Addition of 8 MW of generation Capacity	20.68	10.92	-	-		Ant. in 2016-17
7	Kudgi, Karnataka	Addition of 2400 MW of generation Capacity	3001.01	2070.68	U#1 TG Box-Up	May'15	Apr'15 (A)	
					U#2 Boiler Hydro test	Jul'15	Aug'15 (A)	
					U#1 Boiler Light up	Aug'15	Dec'15 (A)	
					U#3 TG erection start	Sep'15	Sep'15 (A)	
					Commissioning of U#1	Mar'16		Ant. in Mar'16
8	Mauda II , Maharashtra	Addition of 1320 MW of generation Capacity	1214.87	922.49	U#4 TG erection start	Jun'15	Aug'15 (A)	
					U#4 Boiler Hydro Test	Dec'15		Ant. in Mar'16
					U#3 TG Boxup	Jan'16	Oct'15 (A)	
9	Solapur , Maharashtra	Addition of 1320 MW of generation Capacity	1465.82	1163.27	U#2 TG Erection Start	May'15	May'15 (A)	
					U#1 TG Box Up	Nov'15	Jul'15 (A)	
					Readiness of CT 1B	Dec'15		Ant. in Mar'16
10	Vindhyachal-V , MP	Addition of 500 MW of generation Capacity	627.24	448.10	Completion of Steam Blowing U#13	Jun'15	May'15 (A)	
					Readiness of Coal feeding system to Bunkers	Jun'15	Jul'15 (A)	
					TG Oil flushing completion	Jul'15	Jun'15 (A)	
					TG on Barring	Jul'15	Jul'15 (A)	
					Commissioning of U#13	Oct'15	Aug'15 (A)	

Sl. No.	Name of Scheme / Programme/ Project	Objective/ Outcome	Outlay 2015-16		Quantifiable Deliverables/Physical Milestones	Processes / Timelines	Achievements wrt col 5	Remarks
1	2	3	4(i)	4(ii)	5	6	7	8
			Plan Budget (RE 2015-16)	Act Exp upto Dec'15				
11	Lata Tapovan, Uttarakhand	Addition of 171 MW of generation Capacity	7.73	3.61	-	-		Work stopped since May'14 due to Hon'ble Supreme Court order
12	Lara , Chattisgarh	Addition of 1600 MW of generation Capacity	1894.23	1650.61	U#1 TG erection start	Sep'15	Aug'15 (A)	
					Chimney Shell Casting Completion	Oct'15	Jul'15 (A)	
					U#2 TG Deck Casting	Nov'15		Ant. in Mar'16
					U#1 Boiler Hydro test	Dec'15	Dec'15 (A)	
13	Gadarwara, MP	Addition of 1600 MW of generation Capacity	1669.82	1862.35	U#1 TG Erection Start	Sep'15		Ant. in Mar'16
					Chimney shell completion	Dec'15	Dec'15 (A)	
					U#1 Boiler Hydro test	Mar'16		Ant. in Mar'16
14	Unchahar-IV, UP	Addition of 500 MW of generation Capacity	509.54	456.76	U#6 Boiler Erection Start	Nov'15	Jun'15 (A)	
15	Singraulli Solar, UP	Addition of 15 MW of generation Capacity	14.22	1.61	-	-	Dec'14 (A)	
16	North Karanpura, Jharkhand	Addition of 1980 MW of generation Capacity	1005.33	228.64	U#1 Start of Boiler Erection	Feb'16		Ant. in Feb'16
17	Darlipalli, Orissa	Addition of 1600 MW of generation Capacity	1306.23	966.33	U#1 Boiler erection start	Jul'15	Apr'15 (A)	
					Start of Chimney shell Casting	Sep'15	Oct'15 (A)	

Sl. No.	Name of Scheme / Programme/ Project	Objective/ Outcome	Outlay 2015-16		Quantifiable Deliverables/Physical Milestones	Processes / Timelines	Achievements wrt col 5	Remarks
1	2	3	4(i)	4(ii)	5	6	7	8
			Plan Budget (RE 2015-16)	Act Exp upto Dec'15				
18	Tanda-II, UP	Addition of 1320 MW of generation Capacity	539.09	361.93	Commencement of structural erection work of Power house	Dec'15		Ant. in Mar'16
19	Rammam, West Bengal	Addition of 120 MW of generation Capacity	95.69	44.65	U#1 Boiler erection start	Feb'16	Dec'15 (A)	
	Subtotal (i) On-going projects		16249.53	11906.64				
ii	New Projects							
1	Barethi, MP	Addition of 2640 MW of generation Capacity	100.00	34.74		-		
2	Khargone, MP	Addition of 1320 MW of generation Capacity	885.32	724.51		-		
3	Bilhaur, UP	Addition of 1320 MW of generation Capacity	375.00	303.74		-		
4	Gajmara, Odisha	Addition of 1600 MW of generation Capacity	0.00	0.00		-		
5	Katwa, West Bengal	Addition of 1320 MW of generation Capacity	32.00	0.00		-		
6	Tacher TPS-III, Odisha	Addition of 1320 MW of generation Capacity	2.00	0.00		-		
7	Pudimadaka, AP	Addition of 4000 MW of generation Capacity	150.00	281.00		-		
8	Renewable Energy Schemes		1370.89	442.31		-		

Sl. No.	Name of Scheme / Programme/ Project	Objective/ Outcome	Outlay 2015-16		Quantifiable Deliverables/Physical Milestones	Processes / Timelines	Achievements wrt col 5	Remarks
1	2	3	4(i)	4(ii)	5	6	7	8
			Plan Budget (RE 2015-16)	Act Exp upto Dec'15				
9	Other New Projects		56.07	0.59	-	-		
	Subtotal (ii) New Projects		2971.28	1786.89				
iii	Coal Mining		1455.22	514.86	-	-		
iv	Renovation and Modernisation		734.15	537.82	-	-		
v	Other Miscellaneous Schemes		3589.82	1410.31	-	-		
	Grand Total (i. to v)		25000.00	16156.50				

NHPC Achievements upto 31.12.2015

(Rs. in crore)

Sl. No.	Name of Schemes / programmes / Projects	Objective/ Outcome	Annual Plan 2015-16			Quantifiable deliverables / Physical Output	Targets	Projected Outcomes	"Process/ Timelines"	Remarks/ Risk factors	Achievement upto 31.12.15
			Sub Debt	IEBR	Total						
1	2	3	4	5	6	7	8	9	10	11	
A	Commissioned Schemes										
1	Dulhasi	Addition of 390 MW Capacity		1.25	1.25	Payment of liabilities and balance minor works.	100%	Addition of 390 MW Capacity	Mar'16	Commissioned in March 2007	Payment of liabilities and balance minor works in progress
2	Chamera-III	Addition of 231 MW Capacity		30.00	30.00	Payment of liabilities and balance minor works.	100%	Addition of 231 MW Capacity	Mar'16	Commissioned in Jun'2012	Payment of liabilities and balance minor works in progress
3	Chutak	Addition of 44 MW Capacity	0.00	30.00	30.00	Payment of liabilities and balance minor works.	100%	Addition of 44 MW Capacity	Mar'16	Commissioned in Jan'2013	Payment of liabilities and balance minor works in progress
4	Teesta Low Dam Project-III	Addition of 132 MW Capacity		40.00	40.00	Payment of liabilities and balance minor works.	100%	Addition of 132 MW Capacity	Mar'16	Commissioned in Mar' 2013	Payment of liabilities and balance minor works in progress
5	Nimoo Bazgo	Addition of 45 MW capacity	0.00	30.00	30.00	Payment of liabilities and balance minor works.	100%	Addition of 45 MW capacity	Mar'16	Commissioned in Oct 2013	Payment of liabilities and balance minor works in progress
6	Uri-II	Addition of 240MW capacity		60.00	60.00	Payment of liabilities and balance minor works.	100%	Addition of 240MW capacity	Mar'16	Commissioned in Feb'14	Payment of liabilities and balance minor works in progress
7	Parbati H. E. Project stage -III	Addition of 520 MW capacity		60.00	60.00	Payment of liabilities and balance minor works.	100%	Addition of 520 MW capacity	Mar'16	Commissioned in May'14	Payment of liabilities and balance minor works in progress
B	Scheme Under Construction										
1	Teesta Low Dam Project-IV	Addition of 160MW capacity		322.16	322.16	Concreting in RCC Dam upto EL.183.0M(- Balance qty. 28000 cum)	100%	Anticipated Project Completion Jul'2016	Apr'15		Completed on May'15
						Concreting in Generator Barrel of Unit-IV(Balance qty. 1750 cum)	100%		Jun'15		Completed on Jun'15

Sl. No.	Name of Schemes / programmes / Projects	Objective/ Outcome	Annual Plan 2015-16			Quantifiable deliverables / Physical Output	Targets	Projected Outcomes	"Process/ Timelines"	Remarks/ Risk factors	Achievement upto 31.12.15
			Sub Debt	IEBR	Total						
1	2	3	4	5	6	7	8	9	10	11	
						Physical Activity		Jul'15		Completed on Oct'15	
						Concreting in power dam (Balance qty. 12450 cum)	100%				
						Auxiliary Bay Concreting (Wall & Slab) (Balance qty. 1581 cum)	100%	Apr'15		Completed on May'15	
						Unit Axis alignment and Box up of Unit-III	100%	Dec'15	Subject to normal local area condition	Likely in May'16	
						Lowering of stator, rotor, U/B Unit-IV	100%	Jan'16		Likely in Jul,16	
						Erection Testing and commissioning of all Draft tube gate	100%	Jan'16		Completed on Nov'15	
						Commissioning of Unit-I	100%	Mar'16		Boxed up, likely in Feb'16	
2	Parbati H. E. Project stage -II	Addition of 800 MW capacity		696.28	696.28	Hydro-mechanical Works in Dam Structure (erection of Radial & stop log Gates)	100%	Oct, '15	Delay due to payment dispute between contractor and the sub-contractor. Delay due to rectification in arm of Radial gate.	35%	
						Completion of Excavation in Pancha feeder Tunnel	658m	Mar, '16	Flash flood in Pancha mallah leading to flooding of tunnel, shortage of labour and extream winter season adversely impacted the work.	Nil	
						Completion of Excavation of Jiwa Feeder Tunnel	563m	Feb, '16	No work from 3 Jul-15 to 4 Sept'15 due to Labour Problem in Sainj area.	179 m	
						Assembly of Stator, Rotor & lowering in Unit-3	100%	Oct, '15	Stator Core building & assembly of stator bar completed in Service Bay & stator lowered in pit, brazing work is balance. Rotor Rim Building & assembly of Poles completed, Fixing of keys going on. Delay in supply of Stator punching adversely impacted the work.	"Unit-3 Stator: 75% Unit-3 Rotor: 75% "	

Sl. No.	Name of Schemes / programmes / Projects	Objective/ Outcome	Annual Plan 2015-16			Quantifiable deliverables / Physical Output	Targets	Projected Outcomes	"Process/ Timelines"	Remarks/ Risk factors	Achievement upto 31.12.15
			Sub Debt	IEBR	Total						
1	2	3	4	5	6	7	8	9	10	11	
3	"Subansiri Lower H. E. Project"	Addition of 2000 MW capacity		1043.87	1043.87	Dam Excavation & Concreting	6250 m3 & 84760 m3	Mar-16	Subject to the resumption of construction activities of Subansiri Lower Project, in full swing, from Apr'15.	"Achievement up to Dec'15 is NIL as project works are stand still since Dec'11. Targets were kept in anticipation of resumption of works from Apr'15."	
						Under ground excavation work	42561 m3	Mar-16			
						Invert lining in HRT & other Hydraulic Tunnels	8634 m3 & 6748 m3	Mar-16			
						Overt lining in HRT & other Hydraulic Tunnels		Mar-16			
						Drilling for grouting	2700 RM	Mar-16			
						Excavation & Concentrating in Power House Area	6300 m3 & 8600 m3	Mar-16			
4	Kishanganga	Addition of 330 MW Capacity	200.00	385.39	585.39	Completion of Spillway concreting	36000 cum	Nov'15	"Agitation by land owners (PAFs) on R&R issue which is pending with State Cabinet for implementation and Law & order problem of Kashmir valley. Intermittent stoppage of works by Project Affected people and other locals on R&R issues & employment."	90% completed	
						Completion of CFRD embankment upto dam top	140000 Cum	Nov'15		completed	
						Overt Lining of HRT(DBM Portion) during the year	3500 m	Mar'16		94% completed	
						Completion of surge shaft lining	30 m	Jun'15		completed	
						Erection & Backfill of PS Liner Lower Limb during the year	230 m	Mar'16		Under progress, yet to be completed	

Sl. No.	Name of Schemes / programmes / Projects	Objective/ Outcome	Annual Plan 2015-16			Quantifiable deliverables / Physical Output	Projected Outcomes	"Process/ Timelines"	Remarks/ Risk factors	Achievement upto 31.12.15
			Sub Debt	IEBR	Total					
1	2	3	4	5	6	7	8	9	10	11
						Physical Activity	Targets	Mar'16		Under progress, yet to be completed
						Stator/ rotor erection and lowering of Unit-II	100%	Feb'16		10% completed
C.										
1	New Schemes Kotli Bhel Stage-1A	Addition of 195 MW capacity	0.00	25.72	25.72	Nominal amount kept for Establishment & Ancillary works.	-	Mar'16	Provision kept for expenditure on R&M, Security expenses etc for maintaining a state of readiness for start of construction works of the project. No Provision for major works & infrastructure development has been kept as per the direction of Hon'ble Supreme Court to stop all construction activities till further orders.	-
2	Kotli Bhel Stage-I B	Addition of 320 MW capacity	0.00	2.24	2.24	Nominal amount kept for Establishment & Ancillary works.		Mar'16	Environment Clearance is available for Kotli Bhel I-B, Environmental Clearance accorded by MoEF was later withdrawn by MoEF. In this context NHPC has filed a civil appeal before Hon'ble Supreme Court. Appeal was heard on many times.	-
3	Kotli Bhel Stage-II	Addition of 530 MW capacity	0.00			Nominal amount kept for Establishment & Ancillary works.		Mar'16		
4	Dibang	Addition of 3000 MW capacity	0.00	41.61	41.61	Hydrological Model Studies	1.0 Crs	Sep-15	Rs. 1.0 Crs and Rs. 5.0 Crs was kept for Hydraulic Model Studies and Design & Consultancy charges respectively in BE 2015-16, but the same could not be carried out due to Pending Project clearances.	Not achvd.

Sl. No.	Name of Schemes / programmes / Projects	Objective/ Outcome	Annual Plan 2015-16			Quantifiable deliverables / Physical Output	Targets	Projected Outcomes	"Process/ Timelines"	Remarks/ Risk factors	Achievement upto 31.12.15
			Sub Debt	IEBR	Total						
1	2	3	4	5	6	7	8	9	10	11	
						Physical Activity	Foreign consultant's report	Sep-15		Not achvd.	
						Study from Foreign Consultant for Dam design etc.	5.0 Crs				
						Survey of Reservoir area	2.5 Crs	Jan-16	Due to non availability of Staffs in the District Land Management Department, Roing as well as Anini the reservoir survey work could not be taken up. However, the same shall be started within two months as proposed by District Administration.	Not achvd. Likely to start within two month.	
						Acquisition of Colony land in Chimiri	" 51.38 Ha (9.35 Crs) "	Jul-15	Due to reduction in dam height by 10m ,the fresh DPR is under preparation. Therefore pre-in- vestigation activities approval from GOI is required before takenup works	Not achieved	
						Development of Land (like fencing of Chimiri Project Colony / Area etc.)	" 51.38 Ha (15 Lacs) "	Mar-16			
						Construction of Colony Roads at Chimiri	" 2.00 KM (0.4 Crs) "	Mar-16			
5	Teesta-IV	Addition of 520 MW capacity	0.00	118.80	118.80	Completion of model studies	Achievement is subject to successful Gram Sabha under Forest Right Act, and CCEA clearance	Dec-15	Studies in final stage, 80% compl. Likely by May'16.	80% ach.	
						Land acquisition for project components(- Forest land)	100%	Jun-15	Not achieved due to Gram Sabha Meeting yet to be conducted in 8 GPUs.	Nil	
						Land acquisition for project components(Private land)	75%	Dec-15	Not achieved. Finali- sation of some policy issues, constitution of S/A unit etc. related to RFCTLARR(Sik- kim) Rules 2015 is still awaited.	Nil	

Sl. No.	Name of Schemes / programmes / Projects	Objective/ Outcome	Annual Plan 2015-16			Quantifiable deliverables / Physical Output	Targets	Projected Outcomes	"Process/ Timelines"	Remarks/ Risk factors	Achievement upto 31.12.15
			Sub Debt	IEBR	Total						
1	2	3	4	5	6	7	8	9	10	11	
						Compliance to conditions of Stg-I Forest Clearance	100%	May-15	Not achieved due to Gram Sabha Meeting yet to be conducted in 8 GPUs.	Nil	
						Hiring of consultant for Township planning of Project at Thimching Bottom Drift	75%	Dec-15	Subject to approval of Competent Authority.	Nil	
6	Tawang- I	Addition of 600 MW capacity	0.00	61.14	61.14	Drifting of Surge Shaft	320 Mtr	Mar'16	Approval from GOI for Pre-investigation activities is required which is still awaited	Nil	
						Construction of colony road	2.5 Km	Mar'16		Nil	
						Teli road strengthening	13 Km	Mar'16		Nil	
						Land acquisition for the project components	240 Ha	Mar'16		Nil	
						Road to Barrage Site	2.5 Km	Mar'16		Nil	
						Road to Adits, CFA etc.	7.7 km	Mar'16		Nil	
						Construction of Site Accommodations	4000 Sqm	Mar'16		Nil	
						Payment for NPY & Compensatory Afforestation	100%	Dec'15	Forest clearance is pending	Nil	
						Construction of colony Boundary Wall	1 Km	Mar'16	Approval from GOI for Pre-investigation activities is required which is still awaited	Nil	
7	Tawang-II	Addition of 800 MW capacity	0.00	90.13	90.13	Hydrological & Metrological Studies	100%	Continuous process	Continuous process	Continuous process	

Sl. No.	Name of Schemes / programmes / Projects	Objective/ Outcome	Annual Plan 2015-16			Quantifiable deliverables / Physical Output	Targets	Projected Outcomes	"Process/Timelines"	Remarks/ Risk factors	Achievement upto 31.12.15
			Sub Debt	IEBR	Total						
1	2	3	4	5	6	7	8	9	10	11	
						Physical Activity Model Studies	100%	The studies are associated as suggested by CEA	Sept'15	"In compliance to FRA 2006, the Gram Sabha level committees were constituted by District Authorities and Gram Sabha meetings were conducted at 7 villages. For remaining villages locals are not cooperating and demanding advance payment. Matter is being pursued with District Authorities for conducting the meetings in other remaining villages. Approval from GOI for Pre-investigation activities is required which is still awaited"	Nil
						Constructions of other access paths	100%	To facilitate the investigation works	Sept'15	Nil	Nil
						Balance Land acquisition for the project components	49 Ha	All these activities are subjected to final notification by GoAP and handing over of land.	June'15	Nil	Nil
						Construction of site accommodations	4000 Scm		Mar'16	Nil	Nil
						Tell Mukto road strengthening and Widening	13 Km	Access road to Power House THEP-I & Barrage Site (THEP- II)	Dec'15	Non- handing over of road by BRO	Nil
						Approach roads to various Adits		Completion of access road to Power House & HRT	Oct'15	Subject to availability of Land & Resolving of resistance by Lamas and villagers	Nil
						Widening of Sajo-Kungba Kunba road	9.5 Km%		Mar'16	Subject to availability of Land	Nil
D.	S&I and Other Schemes										

Sl. No.	Name of Schemes / programmes / Projects	Objective/ Outcome	Annual Plan 2015-16			Quantifiable deliverables / Physical Output	Targets	Projected Outcomes	"Process/ Timelines"	Remarks/ Risk factors	Achievement upto 31.12.15
			Sub Debt	IEBR	Total						
1	Bursar	3 Addition of 1020 MW capacity	4 0.00	5 38.93	6 38.93	7 Drilling	8 2000 m	9 Mar'16	10 "The work of Drilling is in full swing for 03 packages of Drilling and approximately 80% Drilling work has been completed for these 03 packages. The work for Drilling for Grutability Holes is also in progress. Out of the total 04 packages for Drifting work, the work is in full swing for 03 packages where almost 65% of the Drifting work has been completed. The remaining 4th package of Drifting work has also been awarded for which the machinery mobilization is under progress and work. The Project sites are located in entirely remote and isolated area which is not connected by Road network and has remained militancy infested for a long time. The J&K Armed Police personnel have been deployed for providing security cover for various works. wild life clearances for left bank area works given on 21.08.2015.	11 1933M	
						Drifting	450 m	Mar'16		372M	
						AIA/EMP Studies	100%	Mar'16		work in progress; Field sampling & data collection completed for three seasons.	
						Construction Material and testing	100%	Mar'16		In progress	

Sl. No.	Name of Schemes / programmes / Projects	Objective/ Outcome	Annual Plan 2015-16			Quantifiable deliverables / Physical Output	Projected Outcomes	"Process/ Timelines"	Remarks/ Risk factors	Achievement upto 31.12.15
			Sub Debt	IEBR	Total					
1	2	3	4	5	6	7	8	9	10	11
E.										
Other New Schemes										
1	Dhauliganga Intermediate (210 MW) & Goriganga-IIIA (120MW)	Addition of 330 MW capacity	0	6.05	6.05	Lump-sum provision kept		March'16	Provision kept for expenditure on R&M, Security expenses etc for maintaining a state of readiness for start of construction works of the project. No Provision for major works & infrastructure development has been kept as per the direction of Hon'ble Supreme Court to stop all construction activities till further orders	Project is under DPR preparation Stage.
2	Other Projects		0	1.00	1.00	Lump-sum provision kept		March'16	Lump-sum provision kept for expenditure on R&M, Security expenses etc	Hon'ble Chief Minister of West Bengal has announced allotment of four Projects namely Teesta Low Dam-V (80 MW), Teesta Low Dam I & II combined (81 MW), Teesta Intermediate (84 MW) and Rammam Stage-I (48 MW) in West Bengal to NHPC in Press Conference held on 02.09.2014 at Kalimpong. Memorandum of Agreement has been signed among Govt. of West Bengal, WB-SEDCL and NHPC on 03.07.2015. The S&I works for preparation/Update of DPRs are under process
F.										
Schemes under Joint Venture (Equity)										
LDHCL (EQUITY)										

Sl. No.	Name of Schemes / programmes / Projects	Objective/ Outcome	Annual Plan 2015-16			Quantifiable deliverables / Physical Output	Targets	Projected Outcomes	"Process/ Timelines"	Remarks/ Risk factors	Achievement upto 31.12.15
			Sub Debt	IEBR	Total						
1	2	3	4	5	6	7	8	9	10	11	
1	Loktak Downstream (66MW) & Thoubal HE Project (E&M Parts)		0	3.00	3.00	Provision for NHPC Equity contribution in the JV company.		March'16	Provision for NHPC Equity contribution in the JV company.	"Additional drilling works & laboratory testing of clay samples in compliance to Conditional Clearance of Geological Chapter by GSI have been undertaken. Submission of draft PIB note is planned to be taken up after technical appraisal of DPR by CEA. Preparation of Bid document is under process"	
b)	CVPPPL(Equity)										
1	Pakal Dul (1000 MW)		0	380.00	380.00	Provision for NHPC Equity contribution in the JV company.		March'16	Provision for NHPC Equity contribution in the JV company	Major works is yet to be awarded by CVPPL Board	
2	Kiru (600 MW)		0	2.00	2.00	Provision for NHPC Equity contribution in the JV company.		March'16	Provision for NHPC Equity contribution in the JV company	"Forest Clearance recommended by the FAC. Govt. order is awaited. EAC meeting for consideration of Environmental Clearance to Kiru HEP was held on 08.02.2016. Minutes awaited."	
3	Kwar (520 MW)		0	2.00	2.00	Provision for NHPC Equity contribution in the JV company.		March'16		"Forest Clearance received. M/s. CVPPL has submitted the action on the modified TOR issued by the MoEF vide letter dtd. 26.08.2015 and M/s CVPPPL has initiated the requisite action on the same. DPR is under advanced stage of examination at CEA"	
c)	JV with Bhutan(Equity)										

Sl. No.	Name of Schemes / programmes / Projects	Objective/ Outcome	Annual Plan 2015-16			Quantifiable deliverables / Physical Output	Targets	Projected Outcomes	"Process/ Timelines"	Remarks/ Risk factors	Achievement upto 31.12.15
			Sub Debt	IEBR	Total						
1	2	3	4	5	6	7	8	9	10	11	
1	Bhutan JV/ Chamkharchhu-I (770 MW)		0	5.00	5.00	Provision for NHPC Equity contribution in the JV company.		March'16	Provision for NHPC Equity contribution in the JV company.	"Revised PIB Memo for circulation by MEA submitted to MoP by NHPC on 10.12.2015. JVA cum SHA & AOI of the JV Company approved by NHPC Management/Board. Signing of SHA & AOI and subsequent registration of JVC is likely in Feb'16.	
G	Wind, Solar Power Projects (NHPC Own)										
1	Wind Power Project (132 MW)	Addition of 132MW capacity	0	350.00	350.00	Provision for advance/bills towards finalisation of 50 MW Wind Farm through EPC contract. Also provision kept for Consultant payments for 82 MW wind Farm proposed in Kerala.	Addition of 50 MW Capacity	March'16	50 MW wind project at Lajalmer in Rajasthan is under construction and likely commissioned in Feb'15	80% completed	
2	Solar Power Project (50 MW)	Addition of 50 MW capacity	0	25.30	25.30	Payment for successful bidders as advance/ Payment against works (running bills).		March'16	Development of 50 MW solar power project in Tamilnadu	NIT issued on 09.06.2015. Letter of Award issued on 13.10.2015. PPA signing with Tamilnadu Govt. is awaited	
H	JV PROJECS-SOLAR & THERMAL(Equity)										
H a)	Thermal										
1	Salka Project (1320 MW)- Equity investment in JV between NHPC and Chhattisgarh State Power Holding Company Limited(GSPHCL)		0	1.00	1.00	Provision for NHPC Equity contribution in the JV company.	Equity investment in JV	March'16	Provision for NHPC Equity contribution in the JV company.	PIB circulated but hold by Ministry of Finance. MOU extension with Govt. of Chhattisgarh is pending	

Sl. No.	Name of Schemes / programmes / Projects	Objective/ Outcome	Annual Plan 2015-16			Quantifiable deliverables / Physical Output	Targets	Projected Outcomes	"Process/ Timelines"	Remarks/ Risk factors	Achievement upto 31.12.15
			Sub Debt	IEBR	Total						
			4	5	6	7	8	9	10	11	
2	Pipraint Project (1320 MW)- Equity investment in JV between NHPC(74%) and Bihar State Power Generation Company Limited(BSPG-CL-26%)	3	0	1.00	1.00	Provision for NHPC Equity contribution in the JV company.	Equity investment in JV	March'16	Provision for NHPC Equity contribution in the JV company.	PIB Memo circulated by MOP on 7.12.2015	
H b)	Solar										
1	Equity investment in JV between NHPC and UP-NEDA (50 MW)		0	109.43	109.43	Provision for NHPC Equity contribution in the JV company.	Equity investment in JV	March'16	Provision for NHPC Equity contribution in the JV company.	JV formed. Power Purchase Agreement is under finalization.	
I	Equity investment in JV between NHPC, NEEPCO and GOAP for execution of Siang upper Stage-I (6000 MW) & Siang Upper Stage- II (3750 MW)		0	15.00	15.00	Provision for NHPC Equity contribution in the JV company.	Equity investment in JV	March'16	Provision for NHPC Equity contribution in the JV company.	MOP informed NHPC that in view of the decision taken in the meeting held on 20.10.2015 in the office of National Security Advisor (NSA) to "plan and implement a multipurpose river valley project on Siang River, which will provide energy, water and flood security along with the livelihood opportunities for the local population", works on Siang Upper Stage-I & Upper Stage-II Projects be put on hold until a final decision is taken in the matter.	
J	R&D Works and CDM			1.59	1.59						
	Total		200.00	3979.90	4179.89						

Power Grid Corporation of India Limited Achievements upto 31.12.2015

(Rs. in crore)

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				Stringing (CKM)	Transformer Erection (No.)		Stringing (CKM)	Transformer Erection (No.)	Stringing (CKM)	Transformer Erection (No.)	Stringing (CKM)	Transformer Erection (No.)	Stringing (CKM)	Transformer Erection (No.)	
	A. ONGOING SCHEMES														
1	Transmission system for development of pooling Stations in Northern part of West Bengal and Transfer of power from Bhutan	1945.35	System strengthening	249	-	Mar-16	19					19	0		Generation proj. delayed (Ant. In 17-18). Works slowed down to the extent possible to match generation. Project now Ant. To be completed by Dec'16
2	North East - NR/WR Inter-connector (Subansiri & Kameng)	807.97	Power Evacuation	30	2	Sep-15	310	61	3	6	4	377	7		Gen. Project delayed (Ant. In 2016-17 & beyond). Project works slowed down to the extent possible to match gen. However NE- NR/WR HVDC Interconnector along with Pole-I has been commissioned in Oct'15 ahead of Gen. Project now Ant. To be completed by Dec'17.
3	Transmission System associated with Pallatana Gas Based Power Project and Bongalgaon Thermal Power Station	108.85	Power Evacuation	451	-	Mar-16	74	32	1	1		107	1		Implementation affected due to geographical constraints, adverse law & order situations, ROW etc. 1 Package under re-tendering. Project now Ant. To be completed by Dec'16
4	Transmission System associated with Rihand-III & Vindhyachal-IV	163.43	Power Evacuation	-	1	Apr-15	22	20	1	0		42	1		Project completed in Aug-15
5	Transmission System for Bath-I	86.04	Power Evacuation	-	-	-	301			0		301	0		Project completed in Jun-15
6	"Transmission System for RAPP 7 & 8-Part-A"	19.61	Power Evacuation	-	-	Mar-16							0		Generation proj. delayed. Project now Ant. To be completed by Dec'16 matching with Gen.
7	"TS for Meja TPS"	10.58	Power Evacuation	-	-	-	5					5	0		Generation proj. delayed. Project now Ant. To be completed by Jun'16 matching with Gen.
8	Transmission System associated with Kudankulam Atomic Power Project	69.72	Power Evacuation	-	-	-							0		Compensation issue yet to be resolved, work to start after it. Project now Ant. To be completed by Dec'16

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9	Transmission System Associated with Kaiga 3&4	22.29	Power Evacuation	-	-	-	20	81		10	1	111	1	Project completed in Oct'15.	
10	TRANSMISSION SYSTEM ASSOCIATED WITH SOLAPUR STPP (2*660MW)	13.61	Power Evacuation	-	-	-					1		1	Project completed in Oct'15.	
11	TRANSMISSION SYSTEM ASSOCIATED WITH MAUDA STAGE-II (2*660 MW) GENERATION PROJECT	712.96	Power Evacuation	831	-	Mar-16	180	41		108		329	0	Works under progress as planned.	
12	TRANSMISSION SYSTEM ASSOCIATED WITH KAKRAPAR APP	93.10	Power Evacuation	210	-	Mar-16				5		5	0	Works under progress as planned.	
13	Transmission System Associated with Lara STPS-I (2x800MW)	137.08	Power Evacuation	20	-	Mar-16				1		1	0	Works under progress as planned.	
14	Transmission System Associated with Mundra UMPP	157.51	Power Evacuation	328	-	Mar-16				98		98	0	Implementation affected due to ROW, 1 pkg. Re-tendered due to unsatisfactory performance.	
15	Transmission System for Krishnapatnam UMPP -PART B	121.08	Power Evacuation	-	-	-	12	11		3		26	0	Implementation affected due to severe ROW problem in balance one line. Completion now Ant. By Feb'16.	
16	Transmission system for Phase I generation Projects in Orissa -Part A	78.14	System strengthening	-	1	Apr-15	33	44		18	1	95	2	Implementation affected due to severe ROW problem in balance one line. Completion now Ant. By Jan'16.	
17	Transmission system for Phase I generation Projects in Orissa -Part B	81.20	System strengthening	498	-	Dec-15	206	125		5		336	0	Project completed in Oct-15	
18	Transmission System for Phase-I generation Projects in Orissa -Part C	72.50	System strengthening	101	-	Sep-15	31	45				76	0	Project completed in Aug-15	
19	Transmission system for Jharkhand IPP/WBSEDCL Projects - Part A1	70.80	System strengthening	165	-	Sep-15	34	2		24		60	0	Gen. Project delayed (Ant. By 16-17 & beyond). Work slowed down to the extent possible. Project now Ant. to be completed by Feb-16.	
20	Transmission system for Jharkhand IPP/WBSEDCL Projects - Part A2	373.18	System strengthening	223	2	Sep-15	313	31		34	2	378	2	Project now Ant. To be completed by Jun'16 due to naxalite problem & delayed land acq. For Varanasi S/S. Gen. project also delayed.	
21	Transmission system for Jharkhand IPP/WBSEDCL Projects - Part B	543.53	System strengthening	863	2	Sep-15	411	114		258		783	0	Project now Ant. To be completed by Jun'16 due to delayed land acq. For Varanasi S/S. Gen. project also delayed.	
22	Transmission System for transfer of power from different projects from Sikkim to NRRWR (part-A)	28.71	System strengthening	44	2	Sep-15	5	25		14	1	44	1	Implementation affected due to delayed land acq. For Kishanganj S/S. Project now Ant. To be completed by Feb'16.	

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23	Transmission system for transfer of Power from generation Projects in Sikkim to NR/WR- DPR -I Part B	131.44	System strengthening	367	-	Dec-15	184	233	33	450	0	0	450	0	Implementation affected due to severe ROW problem & delayed land acq. For Kishanganj S/S. Project now Ant. To be completed by Mar-16.
24	Transmission System for IPP generation projects in Madhya Pradesh & Chhattisgarh	86.39	Power Evacuation	-	2	-						2		2	Project completed in Jun'15.
25	Establishment of Pooling Stations at Champa and Raigarh (near Tamnar) for IPP Generation Projects in Chhattisgarh (DPR- 2)	117.36	Power Evacuation	56	3	Jun'15	53		2				53	2	Project completed in May'15 except balance ICT's at Champa to be commissioned alongwith Champa-Kurukshetra HVDC link (ant. in Jun'16).
26	TS strength. in western part of WR for IPP Generation Projects in Chhattisgarh - DPR 4	100.80	Power Evacuation	430	-	Dec'15	66	17	14	97	0	0	97	0	Implementation affected due to severe ROW problem because of involvement of grape garden in Aurangabad-Boisar line. Project now Ant. To be completed by Jun'16
27	System Strengthening in North/ West part of WR for IPP Projects in Chhattisgarh DPR -5	591.41	Power Evacuation	179	-	Mar-16	70	26	87	183	0	0	183	0	Forest clearance awaited for Aurangabad-Padghe line. Project now Ant. To be completed by Jun'16. Readiness of Kudus S/S by MSETCL is critical for completion of project.
28	System strengthening in Raipur-Wardha corridor for IPP Projects in Chhattisgarh DPR -6	347.52	Power Evacuation	678	-	Dec-15	108	11	42	161	0	0	161	0	Stage-I forest clearance (295 Ha) received in Jun'15. Permission to work obtained in Jul'15. Project now Ant. To be completed by Jun'16.
29	System strengthening in Wardha-Aurangabad corridor for IPP Projects in Chhattisgarh DPR -7	75.64	System strengthening	-	-	-								0	Project completed in Mar'15. Outlay kept for final payments, under process.
30	WR-NR HVDC interconnector for IPP Projects in Chhattisgarh DPR -9	1949.54	Power Evacuation	819	2	Mar-16	455	229	488	1172	0	0	1172	0	Completion now Ant. By Jun'16 (Delayed due to delay in acq. Of land for Champa S/S & ROW in Western UP for HVDC line).
31	Common system associated with Coastal Energen Private Limited and Ind-Barath Power (Madras) Limited LTOA Generation Projects in Tuticorin Area (Part-A)	9.82	Power Evacuation	-	-	-								0	Project completed in Jan'15. Outlay kept for final payments, under process.
32	Common system associated with Coastal Energen Private Limited and Ind-Barath Power (Madras) Limited LTOA Generation Projects in Tuticorin Area (Part-B)	381.35	Power Evacuation	-	-	-	18	31	56	105	0	0	105	0	Completion slipped to FY 16-17 due to severe ROW problem & contractual issues. Issues resolved & project now Ant. To be completed by Jun'16.
33	Common TS associated with East Coast & NCC Power Projects in Srikakulam Area (Part-A)	337.67	Power Evacuation	200	-	Mar-16	86	10	26	122	0	0	122	0	Gen. Project delayed. Project now Ant. To be completed by Aug'16 matching with Srikakulam-Venagiri TBCB Line (Sch-Aug'16) for import of power from ER to SR.

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34	Common TS associated with East Coast & NCC Power Projects in Srikakulam Area (Part-B)	899.79	Power Evacuation	400	-	Mar-16	47	7		1	55	0			Generation project delayed. Implementation affected due to severe ROW problem & critical processing of forest case. Project now Ant. To be completed by Dec'16.
35	Common TS associated with East Coast & NCC Power Projects in Srikakulam Area (Part-C)	45.09	Power Evacuation	-	-	-						0			Gen. Project delayed. Project now Ant. To be completed by Aug'16 matching with Srikakulam-Vemagiri TBCB Line (Sch.-Aug'16) for import of power from ER to SR.
36	Common Transmission Scheme associated with ISGS Projects in Nagapattinam/Cuddalore area of Tamil Nadu-Part-A1(a)	22.67	System strengthening	-	-	-						0			Project completed in May'15. Outlay kept for final payments, under process.
37	Transmission system for Connectivity of Essar Power Gujarat Limited	7.92	System strengthening	-	-	-	149	16		18	183	0			Gen project delayed & implementation affected due to severe ROW problem. Project now Ant. To be completed by Mar'16.
38	Common Transmission System Associated with Generation Projects in Nagapattinam/ Cuddalore Area, Tamil Nadu - Part-A1 (b)	51.30		-	-	-						0			Project Ant. To be completed by May'17.
39	Transmission system associated with Contingency plan for evacuation of power from IL&FS(2X600MW)	14.11		-	-	-	45	1		14	60	0			Project completed in Nov'15.
40	Eastern Region System Strengthening-III (ERSS-II)	79.73	System strengthening	156	2	Mar-16	68	37		24	129	0			Implementation affected due to delayed land acq. For Daltonganj S/S (Pkg. being re-tendered). Project now Ant. To be completed by Jun'17.
41	Eastern Region Strengthening Scheme -V (ERSS-V)	477.05	System strengthening	403	-	Mar-16	5	7		76	88	0			Implementation affected due to delay in acq. Of land for Rajarhat S/S (Land acquired in Feb'14). Project Ant. To be completed by Apr'16.
42	Split Bus arrangement in various Sub-stations of ER	36.40		-	-	-	0	3		3	6	0			Completion delayed due to ROW problem & Non-readiness of associated bays at Kahalgaon STPP Switchyard end. Project Ant. To be completed by Mar'16.
43	Provision of Spare ICTs & Reactors for ER	1.02		-	-	-						0			Outlays kept for balance payments under progress.
44	Eastern Region Strengthening Scheme -VIII (ERSS-VIII)	21.58	System strengthening	-	-	-						0			Involves bay exn./ reactor installation works.Outlays kept for balance work. Project Ant. To be completed by Feb'16.

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45	Northern Region System Strengthening-XIX (NRSS-XIX)	25.59		-	-	-	36	20		46		102	0	Implementation affected due to ROW problem in western UP & delayed land acq. For Bagpat S/S. Project now Ant. To be completed by Jan'16.	
46	Northern Region System Strengthening-XXIV (NRSS-XX-IV)	45.94	System strengthening	264	-	Dec-15		22		31		53	0	Implementation affected due to ROW problem. Project now Ant. To be completed by Jun'16.	
47	Northern Region System Strengthening-XVI (NRSS-XVI)	67.36	System strengthening	60	-	Mar-16	22	33		22		77	0	Final forest approval to be issued after cabinet meeting (awaited). Limited working period due to snow-bound area affecting implementation. Project now Ant. To be completed by Jun'16.	
48	Northern Region System Strengthening-XVII (NRSS-XVII)	19.58	System strengthening	151	-	Sep-15	11	24		48		83	0	Implementation affected due to severe ROW problem in Western UP. Project now Ant. To be completed by Jun'16.	
49	Northern Region System Strengthening-XXI (NRSS-XXI)	112.53	System strengthening	152	1	Mar-16	95	26	1	33		154	2	Implementation affected due to severe ROW problem in Western UP. Project Ant. To be completed by Mar'16.	
50	NRSS - XXVI	106.19	System strengthening	-	-	-	97					97	0	Project completed in May-15 (delayed due to ROW problem).	
51	NRSS - XXVII	21.43	System strengthening	-	-	-	25			1		26	0	Line completed in Dec-15. Commissioning matching with Rajpura S/S Extn. of PSTCS, likely to be completed by Feb-16.	
52	NRSS - XXVIII	63.50	System strengthening	151	-	Sep-15	104	30		40		174	0	Project Ant. to be completed by Feb-16 matching with readness of Varanasi S/S (Land acquired progressively by Jun'14).	
53	System Strengthening in Northern region for Sasan and Mundra UMPP	9.59	System strengthening	-	-	-	75	25		45		145	0	Project Ant. to be completed by Mar-16 (delayed due to contractual issues).	
54	Northern Region Transmission System Strengthening	94.44	System strengthening	-	-	-				2			2	Project now Ant. To be completed by Feb'16 (delayed due to Severe ROW problem in Western U.P.	
55	Spare ICTs in NR	10.00		-	-	-							0	Outlays kept for balance payments under progress.	
56	System Strengthening in NR	33.70	System strengthening	-	-	-							0	Outlays kept for balance payments under progress.	
57	"Augmentation of Transformers in Northern Region-Part-A"	12.65		-	-	-							0	Outlays kept for balance payments under progress.	

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58	INTER-REGIONAL SYSTEM STRENGTHENING SCHEME FOR NORTHERN REGION AND WESTERN REGION - PART B	334.87	System strengthening	-	-	-	-	-	-	-	-	-	-	-	Outlay kept for infrastructural works under progress as per program.
59	Southern Region System Strengthening - XII (SRSS-XII)	8.72	System strengthening	-	-	-	-	-	-	-	-	-	-	-	Completion delayed due to severe ROW problem. Completion Uncertain.
60	Southern Region System Strengthening - XIII (SRSS - XIII)	77.55	System strengthening	122	-	Dec-15	32	74	48	2	154	2	0	0	Implementation affected due to severe ROW problem at Karnataka end. Completion Uncertain.
61	Southern Region System Strengthening - XIV (SRSS- XIV)	30.57	System strengthening	-	-	-	9	-	-	-	9	-	-	-	Completion delayed due to severe ROW problem at Karnataka end. Project now Ant. To be completed by Feb'16.
62	SRSS-XVIII (EARLIER SRSS-XVIIIA & XVIII B MERGED)	241.83	System strengthening	-	-	-	50	13	-	-	63	-	-	-	Project completed in Jul-15 (Completion delayed due to ROW problem in Andhra Pradesh).
63	"SRSS-XVII"	513.54	System strengthening	495	-	Sep-15	258	224	27	-	509	-	-	-	Project completed in Dec-15 (completion delayed due to delay in aq. Of land for Kudgt S/S. acquired in Feb'14).
64	Provision of Spare ICTs and Reactors in SR	0.00		-	-	-	-	-	-	-	-	-	-	-	
65	Western Region System Strengthening - V (WRSS-V)	4.33	System strengthening	-	2	-	-	1	1	-	2	-	-	-	Implementation affected due to severe ROW problem. Project now Ant. To be completed by Jun'16.
66	Western Region System Strengthening-XIII (WRSS-XIII)	1.90	System strengthening	-	-	-	-	-	-	-	-	-	-	-	Outlays kept for balance payments under progress.
67	TS for establishment of 400/220KV GIS at Magarwada in UT DD	16.96		-	-	-	-	-	-	-	-	-	-	-	Outlays kept for balance payments under progress.
68	Line Bays & Reactor provisions at POWERGRID sub-stations associated with SS Common for WR & NR	15.63		-	-	-	-	-	-	-	-	-	-	-	Project completed in Aug'15. Outlays kept for final payments under progress.
69	Line Bays & Reactor Provision associated with SS for WR	13.33		-	-	-	-	-	-	-	-	-	-	-	Project completed in Jun'15. Outlays kept for final payments under progress.
70	"Augmentation of Transformer and Bays in WR"	1.65		-	-	-	-	-	-	-	-	-	-	-	Outlays kept for balance payments under progress.
71	Installation of Reactors in Western Region(WR)	4.88		-	-	-	-	-	-	-	-	-	-	-	Outlays kept for balance payments under progress.

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72	Installation of Reactors in Western Region(WR)(Part-II)	4.36		-	-	-							0	0	Outlays kept for balance payments under progress.
73	"INSTALLATION OF TRANSFORMER AND PROCUREMENT OF SPARE CONVERTER TRANSFORMER AT BHADRAWATI HVDC BACK-TO-BACK STATION"	140.82		-	-	-							0	0	Procurement of spare converter is under process. Project Ant. To be completed by Sep'16.
74	INTER-REGIONAL SYSTEM STRENGTHENING SCHEME FOR NORTHERN REGION AND WESTERN REGION. - PART A	339.25	System strengthening	485	-	Mar-16	198	266					464	0	Project completed in Sep-15.
75	Provision of Spare ICTs and Reactors in NER	0.00		-	-	-							0	0	
76	Northern Region Strengthening Scheme-XXV (NRSS-XXV)	228.97	System strengthening	216	-	Mar-16	128	28	149	305				0	Implementation affected due to ROW problem at Bhiwani end. Project now Ant. to be completed by Jun-16.
77	Sub-station works associated with NERSS-II(Part A)	16.85		-	-	-							0	0	Outlay kept for initial infrastructural works.
78	Eastern Region Strengthening Scheme -X (ERSS-X)	64.85	System strengthening	-	-	-							0	0	Outlay kept for initial infrastructural works.
79	"Northern Region Strengthening Scheme-XXX (NRSS-XXX) (earlier envisaged as Singrauli-III TPS)"	83.96		-	-	-							5	0	Project Ant. To be completed by Jun'16.
80	Northern Region Strengthening Scheme-XXXII (NRSS-XXXII)	182.26	System strengthening	295	4	Mar-16	3		11	14				0	Project Ant. To be completed by Jun'16.
81	System strengthening in Southern Region -XXII (SRSS-XXII)	190.40	System strengthening	50	-	Mar-16	52	32	35	119				0	Project completed in Dec-15, 8 months ahead of Schedule.
82	Eastern Region Strengthening Scheme -IX (ERSS-IX)	37.74	System strengthening	-	2	Feb-16					1			1	Completion delayed due to delay in manufacturing of Reactors by M/s BHEL. Project now Ant. To be completed by Jun'16.
83	Eastern Region Strengthening Scheme -XII (ERSS-XII)	153.77	System strengthening	-	-	-				1				2	Involves bays extn./reactors/preliminary works for ICTs works under progress as per program.
84	Eastern Region Strengthening Scheme -XIII (ERSS-XIII)	41.32	System strengthening	-	-	-								0	Involves re-conductoring of existing lines. Works under progress as per/ ahead of program.
85	STATIC VAR COMPENSATION IN NORTHERN REGION	182.78		-	-	-								0	Involves bays extn./preliminary works under progress as per program.

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				Stringing (CKM)	Transformer Erection (No.)		Stringing (CKM)	Transformer Erection (No.)	Stringing (CKM)	Transformer Erection (No.)	Stringing (CKM)	Transformer Erection (No.)	Stringing (CKM)	Transformer Erection (No.)	
86	INSTALLATION OF BUS RE- ACTORS & ICTs IN WESTERN REGION	121.78		-	-	-							0		Involves bays extn./reactors/preliminary works for ICTs works under progress as per program.
87	TRANSMISSION SYSTEM STRENGTHENING IN WESTERN REGION - NORTHERN REGION FOR TRANSMISSION CORRIDOR FOR IPPs IN CHHATTISGARH	489.98		-	-	-							0		Outlay kept for preliminary/infrastructural works under progress as per program.
88	System Strengthening in Southern Region-XX	127.59	System strengthening	-	7	Mar-16							0		Works under progress as per program..
89	Sub station extension works associated with Transmission System for connectivity for NCC Power Projects Ltd.	90.07		-	-	-		2			23		0	25	Involves bays extn. works under progress.
90	Substation works associated with System Strengthening in Southern Region for Import of power from Eastern Region	298.97		-	-	-							0		Involves infrastructural/bays extn./ Substation works under progress as per program.
91	AUGMENTATION OF TRANSMISSION CAPACITY IN NORTHERN REGION- PART-B	90.59		-	-	-							0		Involves infrastructural/bays extn./ Substation works under progress as per program.
92	National Transmission Asset Management Centre	55.00		-	-	-							0		
93	POWERGRID ERP Project	38.40		-	-	-							0		
94	SR-II Complex (RHQ building)	12.56		-	-	-							0		
95	Fibre Optic Communication System in lieu of existing ULDC Micro wave Links in ER	44.99		-	-	-							0		
96	Fibre Optic Communication System in lieu of existing ULDC Micro wave Links in SR	27.24		-	-	-							0		
97	Fibre Optic Communication System in lieu of existing ULDC Micro wave Links in NER	4.67		-	-	-							0		
98	Upgradation/Expansion of SCADA/EIMS system of SLDC of NR(ULDC Ph-II)	20.35		-	-	-							0		
99	Upgradation/Expansion of SCADA/EIMS system of SLDC of WR	5.82		-	-	-							0		
100	Upgradation/Expansion of SCADA/EIMS system of SLDC of ER	14.33		-	-	-							0		

"S. NO"	Name of the Projects/Scheme/ Programme	"Annual Plan (BE 2015-16)"	"Objective/ Outcomes"	"Quantifiable Deliverables FINAL"		Process/ Time-lines	Achievements during Quarter - I (upto June'15)		Achievements during Quarter - II (upto Sep'15)		Achievements during Quarter - III (upto Dec'15)		Achievements upto Quarter -III		Remarks
				Stringing (CKM)	Transformer Erection (No.)		Stringing (CKM)	Transformer Erection (No.)	Stringing (CKM)	Transformer Erection (No.)	Stringing (CKM)	Transformer Erection (No.)	Stringing (CKM)	Transformer Erection (No.)	
101	Establishment of Fiber Optic Communication System in WR under master communication plan	65.64		-	-	-							0		
102	Establishment of Fiber Optic Communication System in NR	44.34		-	-	-							0		
103	Fiber Optic Communication System in ER under expansion of Wideband communication network in ER	4.96		-	-	-							0		
104	Power Grid Equity (Parbati-II & Koldam)	8.87		-	-	-							0		
105	Power Grid Equity (Teesta Urja Ltd.)	20.88		-	-	-							0		
106	National High Power Test Laboratory Private Limited	0.91		-	-	-							0		
107	Energy Efficiency Services Limited	1.31		-	-	-							0		
108	JV- Bihar Grid Company Limited	115.50		-	-	-							0		
109	JV- Kalinga Bidyut Prasaran Nigam Pvt. Limited	12.00		-	-	-							0		
110	Implementation of Unified Real Time Dynamic State Measurement (URTDMSM)-Phase I	2.50		-	-	-							0		
111	Upgradation/Expansion of SCADA/EMS system of SLDC of NER	27.11		-	-	-							0		
	Sub Total Ongoing Schemes	16804.77		10142	35		4525	4	2080	7	2032	18	8637	29	
	B. NEW SCHEMES														
1	Interconnecting lines from North Karanpura STPP to the pooling stations at Ranchi and Gaya	91.22		-	-	-							0		Outlay kept for preliminary/infrastructural works
2	ASSOCIATED TRANSMISSION SYSTEM WITH TEHRI PSP	173.79	Power Evacuation	-	-	-							0		Outlay kept for preliminary/infrastructural works
3	TRANSMISSION SYSTEM ASSOCIATED WITH RAPP 7 & 8 - Part B	39.66	Power Evacuation	-	-	-							0		Outlay kept for preliminary/infrastructural works
4	Transmission System associated with Darliparili TPS	100.89	Power Evacuation	-	-	-							0		Outlay kept for preliminary/infrastructural works
5	TRANSMISSION SYSTEM ASSOCIATED WITH VINDHY-ACHAL-V PROJECT	57.14	Power Evacuation	-	-	-							0		Outlay kept for preliminary/infrastructural works

"S. NO"	Name of the Projects/Scheme/ Programme	"Annual Plan (BE 2015-16)"	"Objective/ Outcomes"	"Quantifiable Deliverables FINAL"		Process/ Time-lines	Achievements during Quarter - I (upto June'15)		Achievements during Quarter - II (upto Sep '15)		Achievements during Quarter - III (upto Dec'15)		Achievements upto Quarter -III		Remarks
				Stringing (CKM)	Transformer Erection (No.)		Stringing (CKM)	Transformer Erection (No.)	Stringing (CKM)	Transformer Erection (No.)	Stringing (CKM)	Transformer Erection (No.)	Stringing (CKM)	Transformer Erection (No.)	
6	Associated Transmission system for Nabinagar-II TPS (3X660 MW) in Bihar	76.68	Power Evacuation	-	-	-	-	-	-	-	-	-	-	0	Outlay kept for preliminary/infrastructural works
7	TRANSMISSION SYSTEM FOR KISHENGANGA HEP	70.11	Power Evacuation	-	-	-	-	-	-	-	-	-	-	0	Outlay kept for preliminary/infrastructural works
8	POWERGRID scope in Transmission system for Phase-I Generation Projects in Odisha	1.32		-	-	-	-	-	-	-	-	-	-	0	
9	Transmission System associated with Tilaiya UMPP (4000 MW) in Jharkhand	0.07	Power Evacuation	-	-	-	-	-	-	-	-	-	-	0	
10	Transmission system associated with Orissa UMPP	1.32	Power Evacuation	-	-	-	-	-	-	-	-	-	-	0	
11	Substation Extension works associated with Eastern Region Strengthening scheme-VI (ERSS-VI)	10.25		-	-	-	-	-	-	-	-	-	-	0	Outlay kept for preliminary/infrastructural works
12	Substation Extension works associated with Eastern Region Strengthening scheme-VII (ERSS-VII)	23.14		-	-	-	-	-	-	-	-	-	-	0	Outlay kept for preliminary/infrastructural works
13	Eastern Region Strengthening Scheme -XI (ERSS-XI)	3.97	System strengthening	-	-	-	-	-	-	-	-	-	-	0	Outlay kept for preliminary/infrastructural works
14	DYNAMIC COMPENSATION (STATCOM) AT NALAGARH & LUCKNOW	45.61		-	-	-	-	-	-	-	-	-	-	0	Outlay kept for preliminary/infrastructural works
15	System Strengthening in Southern Region-XXI	3.31	System strengthening	-	-	-	-	-	-	-	-	-	-	0	Outlay kept for preliminary/infrastructural works
16	INSTALLATION OF STATCOMs IN WESTERN REGION	393.35		-	-	-	-	-	-	-	-	-	-	0	Outlay kept for preliminary/infrastructural works
17	ER-II Headquarters	7.79		-	-	-	-	-	-	-	-	-	-	0	
18	Line & Reactor Bay For TS Under Private Sector in ER & NER	0.00		-	-	-	-	-	-	-	-	-	-	0	
19	Northern Region Strengthening Scheme-XXXIV (NRSS-XXXIV)	40.65	System strengthening	-	-	-	-	32	-	-	-	-	-	0	Outlay kept for preliminary/infrastructural works
20	Bus Reactor in Northern Region(Phase - II)	32.14		-	-	-	-	-	-	-	-	-	-	0	Outlay kept for preliminary/infrastructural works
21	System strengthening in Southern Region-XXIII	17.75	System strengthening	-	-	-	-	-	-	-	-	-	-	0	Outlay kept for preliminary/infrastructural works

"S. NO"	Name of the Projects/Scheme/ Programme	"Annual Plan (BE 2015-16)"	"Objective/ Outcomes"	"Quantifiable Deliverables FINAL"		Process/ Time-lines	Achievements during Quarter - I (upto June'15)		Achievements during Quarter - II (upto Sep'15)		Achievements during Quarter - III (upto Dec'15)		Achievements upto Quarter -III		Remarks
				Stringing (CKM)	Transformer Erection (No.)		Stringing (CKM)	Transformer Erection (No.)	Stringing (CKM)	Transformer Erection (No.)	Stringing (CKM)	Transformer Erection (No.)	Stringing (CKM)	Transformer Erection (No.)	
22	Substation works associated with Hyderabad (Maheshwaram) Pooling station	149.87		-	-	-									Outlay kept for preliminary/infrastructural works
23	Wardha-Hyderabad 765kV link	931.09	System strengthening	-	-	-					5		5	0	Outlay kept for preliminary/infrastructural works /Supply/Foundation/Tower erection
24	System Strengthening associated with mundra UMPP	9.74	System strengthening	-	-	-	71		9				80	0	Outlay kept for preliminary/infrastructural works
25	Provision of 2 nos. of 400kV Bays at Bhiwani	7.00		-	-	-								0	
26	NERSS-III	56.19		-	-	-								0	
27	Provision of 400kV Bays for NRSS-XXXI (b)	7.83		-	-	-								0	
28	Provision of 400kV Bays for NRSS-XXIX	4.87		-	-	-								0	
29	Augmentation of transformation capacity at Mainpuri & Sikar	3.31		-	-	-								0	
30	Transmission System Associated with DGEN TPS (1200MW) of Torrent Power Limited	33.05		-	-	-								0	Outlay kept for preliminary/infrastructural works
31	Substation works associated with NERSS-II (Part B)	21.88		-	-	-								0	
32	POWERGRID RINL Structures Ltd	9.90		-	-	-								0	
33	POWERGRID NALCO Conductors Ltd.	4.20		-	-	-								0	
34	MoU - JV to form for POWER-GRID Insulator	1.47		-	-	-								0	
35	FO NR Expansion	81.17		-	-	-								0	
36	Supply of CLR Insulators	24.50		-	-	-								0	Outlay kept for preliminary/infrastructural works
37	Sambhar Ultra Solar Power Plant Ltd Generation & Transmission JV (PowerGrid-16%)	35.20		-	-	-								0	Outlay kept for preliminary/infrastructural works
	Sub Total New Schemes	2571.41		0	0		103	0	9	0	40	0	152	0	
	C. Completed Schemes													0	
1	Transmission System for Start up power to DVC & Malithon RB Projects	0.01		-	-	-								0	

"S. NO"	Name of the Projects/Scheme/ Programme	"Annual Plan (BE 2015-16)"	"Objective/ Outcomes"	"Quantifiable Deliverables FINAL"		Process/ Time-lines	Achievements during Quarter - I (upto June'15)		Achievements during Quarter - II (upto Sep '15)		Achievements during Quarter - III (upto Dec'15)		Achievements upto Quarter -III		Remarks
				Stringing (CKM)	Transformer Erection (No.)		Stringing (CKM)	Transformer Erection (No.)	Stringing (CKM)	Transformer Erection (No.)	Stringing (CKM)	Transformer Erection (No.)	Stringing (CKM)	Transformer Erection (No.)	
2	Transmission System for Farakka Stage-III	0.04		-	-	-							0		
3	Eastern Region System Strengthening - II (ERSS-II)	0.07		-	-	-							0		
4	POWERGRID Sub-station works associated with Transmission Scheme for enabling import of NER/ER surplus power by NR	0.30		-	-	-							0		
5	Establishment of 400/220 kV GIS Pooling Station Near CHAMERA-II	1.40		-	-	-							0		
6	Southern Region System Strengthening - X (SRSS - X)	3.70		-	-	-							0		
7	Telecom Base Network	112.00		-	-	-							0		
8	Transmission System for BARH	0.47		-	-	-							0		
9	NRSS 765kV for NCR and around Part-II	3.85		-	-	-							0		Outlays kept for balance payments under progress.
10	NRSS 765kV for NCR and around Part-III	10.15		-	-	-							0		Outlays kept for balance payments under progress.
11	Eastern Region System Strengthening - IV (ERSS - IV)	1.43	System strengthening	-	-	-							0		Outlays kept for balance payments under progress.
12	India - Bangladesh interconnection (India Portion)	6.30	System strengthening	-	-	-							0		Outlays kept for balance payments under progress.
13	Establishment of Pooling Stations at Raigarh (Kotra) and Raipur for IPP Generation Projects in Chhattisgarh (DPR- 1)	30.29	Power Evacuation	-	-	-							0		Outlays kept for balance payments under progress.
14	Transmission System for Parbait-III	7.70	Power Evacuation	-	-	-							0		Outlays kept for balance payments under progress.
15	Northern Region System Strengthening-XX (NRSS-XX)	16.26	System strengthening	-	-	-							0		Outlays kept for balance payments under progress.
16	Eastern Region System Strengthening-I (ERSS-I)	1.15	System strengthening	-	-	-							0		Outlays kept for balance payments under progress.
17	DVC & Maithon RB	9.79	Power Evacuation	-	-	-							0		Outlays kept for balance payments under progress.
18	Transmission System Associated with Sasan UMIPP	5.65	Power Evacuation	-	-	-							0		Outlays kept for balance payments under progress.

"S. NO"	Name of the Projects/Scheme/ Programme	"Annual Plan (BE 2015-16)"	"Objective/ Outcomes"	"Quantifiable Deliverables FINAL"		Process/ Time-lines	Achievements during Quarter - I (upto June'15)		Achievements during Quarter - II (upto Sep'15)		Achievements during Quarter - III (upto Dec'15)		Achievements upto Quarter -III		Remarks
				Stringing (CKM)	Transformer Erection (No.)		Stringing (CKM)	Transformer Erection (No.)	Stringing (CKM)	Transformer Erection (No.)	Stringing (CKM)	Transformer Erection (No.)	Stringing (CKM)	Transformer Erection (No.)	
19	Supplementary Transmission System associated with DVC & Malithon RB	3.39	Power Evacuation	-	-	-	-	-	-	-	-	-	-	0	Outlays kept for balance payments under progress.
20	Common system associated with ISGS projects in Krishnapatham Area of Andhra Pradesh	61.08	Power Evacuation	-	-	-	-	-	-	-	-	-	-	0	Outlays kept for balance payments under progress.
21	Integration of Pooling Stations in Chhattisgarh with central part of WR for IPP Generation Projects in Chhattisgarh (DPR - 3)	9.06	Power Evacuation	-	-	-	-	-	-	-	-	-	-	0	
22	SRSS - XIX	299.68	System strengthening	-	-	-	-	-	-	-	-	-	-	0	Outlays kept for balance payments under progress.
23	Northern Region System Strengthening-XV (NRSS-XV)	6.38	System strengthening	-	-	-	-	-	-	-	-	-	-	0	Outlays kept for balance payments under progress.
24	Transmission System for Rampur	2.55	Power Evacuation	-	-	-	-	-	-	-	-	-	-	0	Outlays kept for balance payments under progress.
25	Supplementary Transmission System for Vallur TPS	12.84	Power Evacuation	-	-	-	-	-	-	-	-	-	-	0	
26	Transmission System for Krishnapatham UMPP -PART C1	3.24	Power Evacuation	-	-	-	-	-	-	-	-	-	-	0	
27	Supplementary TS of upcoming IPP in Chhattisgarh	2.20	System strengthening	-	-	-	-	-	-	-	-	-	-	0	Outlays kept for balance payments under progress.
28	Transmission System for connectivity of MB Power (M.P. Limited)	6.46	Power Evacuation	-	-	-	-	-	-	-	-	-	-	0	Outlays kept for balance payments under progress.
29	"Augmentation of Transformation Capacity in NR & ER"	6.30		-	-	-	-	-	-	-	-	-	-	0	Outlays kept for balance payments under progress.
	Sub Total New Schemes	623.81		0	0		0	0	0	0	0	0	0	0	
	Total	20000		10142	35		4628	4	2089	7	2072	18	8789	29	

THDC INDIA LIMITED
Achievements upto 31.12.2015

(Rs. in crore)

Sl. No.	Name of Schemes/ Programme	Objective/ Outcome	Annual Plan (2015-16) Proposed (RBE)	Quantifiable Deliverables/Physical Outputs	Processes/ Timelines	Achivement w.r.t Col(5) as on 31.12.15	Remarks/ Current Status
1	2	3	4	5	6	7	8
1	KOTESHWAR HEP (4X100)	Hydro Power Generation	59.44				Project already commissioned. Amount kept for miscellaneous/pending works. For balance civil works LOA has been issued to M/s Patel Engg. on 18.10.2014. The work amounting to ` 23 Cr completed up to Oct '15.
2	VISHNUGAD PIPALKO-TI HEP (4X111MW)	Hydro Power Generation	373.10	Complete Excavation of Adit to Power House Top (EL 1054).	Oct'15	100%	Completed on 27.11.2015.
				Complete Excavation of Adit 1 to HRT	15.03.16	In Progress	Excavation is in progress. Likely to be completed by 31.03.2016.
				River Diversion	29.02.16	In Progress	River Diversion works are in progress. Likely to be completed by March '16.
3	TEHRI PSP (1000 MW)	Hydro Power Generation	665.89	Complete Bench Excavation of Top chamber of U/S Surge Shaft (HRT-3)	Sept'15	In Progress	Presently Crown slashing of top chamber is in progress and 22% of total excavation has been completed. Due to difficult geological conditions, extensive support system is being provided for safety reasons. The target is likely to be achieved by Dec-15.

Sl. No.	Name of Schemes/ Programme	Objective/ Outcome	Annual Plan (2015-16) Proposed (RBE)	Quantifiable Deliverables/Physical Outputs	Processes/ Timelines	Achievement w.r.t Col(5) as on 31.12.15	Remarks/ Current Status
1	2	3	4	5	6	7	8
				Complete Bench Excavation of Top Chamber of D/S Surge Shaft TRT-4 & TRT-3 including link portion (from EL 658.65 to EL 641.50)	Feb'16	In Progress	After completion of crown slashing and excavation of one bench of Top Chamber of D/s Surge Shaft -3, presently Crown slashing of Link Tunnel is in progress. Total approx. 15% excavation has been completed. Complete Excavation of Top Chamber of D/s Surge Shaft - 3 & 4 is likely to be completed by Feb '16.
				Complete Erection of EOT Crane 1 in Service bay including fixing of embedments and laying of rails	Mar'16	In Progress	Prior to commencement of erection of EOT Crane, Service Bay raft including Concreting of HVAC and Cable galleries is required to be ready in Service Bay area of Machine Hall.* In addition, in Control room area and Unit -5 area excavation to be done upto EL 569.00 m and EL 576.00 m respectively. Excavation of HVAC and cable Galleries in Service bay area has been completed . After completion of support measures in cable gallery , laying of earth mat and mudmat is in progress. Support measures in HVAC gallery of Machine Hall is in progress. Excavation in Control room area and Unit areas is also in progress. Erection of EOT Crane is likely to be completed by Mar '16 subject to availability of service raft by 31.01.16.

Sl. No.	Name of Schemes/ Programme	Objective/ Outcome	Annual Plan (2015-16) Proposed (RBE)	Quantifiable Deliverables/Physical Outputs	Processes/ Timelines	Achievement w.r.t Col(5) as on 31.12.15	Remarks/ Current Status
1	2	3	4	5	6	7	8
4	DHUKWAN HEP (3X8MW)	Hydro Power Generation	33.31				Contract for Electro-Mechanical package has been awarded on 13.12.15 with date of commencement 30 days from issuance of LOA and time for completion 25 months
5	NEW PROJECTS						
	i) Bokang Bailing (330MW)	Hydro Power Generation	17.33	Consultancy works, FR Preparation Work	-		Project lies out side the protected area of Askot Musk Deer Park Sanctuary and accordingly GoUK agreed on 12.08.2014 to withdraw their proposal seeking approval of NBWL for carrying out S&I work.
	ii) Malari Jhelam (65MW)			DPR Preparation Work	-		Projects affected due to Hon'ble Supreme Court. Order 13th aug-13 directives MoEF & State of Uttarakhand not to grant any EC & FC for any new hydro-electric projects in the state of Uttarakhand until further orders.
	iii) Jhelam Tamak (108 MW)			TEC, Stage - II activities.	-		
	iv) Sankosh Multi Purpose Project (2585 MW)			Design and Consultancy works.	-		DPR already submitted to CEA/GWC on 27.08.2012. Site Specific seismic study as per new guidelines of NCSDP (National Committee on seismic Design parameters) is to be conducted as finalised during meeting with Member (Hydro), CEA on 19.09.15. The study shall be completed by March-16. Accordingly work has been awarded to IIT, Roorkee.

Sl. No.	Name of Schemes/ Programme	Objective/ Outcome	Annual Plan (2015-16) Proposed (RBE)	Quantifiable Deliverables/Physical Outputs	Processes/ Timelines	Achievement w.r.t Co(5) as on 31.12.15	Remarks/ Current Status
1	2 v) Bunakha HEP (180 MW)	3	4	5 Design and Consultancy works.	6 -	7	8 Implementation agreement has been signed between Gol & RGoB on 22nd April'14. Final EIA/EEMP report has been sent to Department of Hydropower & power systems MoEA, RGoB, Thimpu on 28.01.15. The original cost estimate of Bunakha HEP was at May 2013 PL, updation at April'15 has been approved by CEA on 07.08.15. As per the direction of CEA, seismic parametric study has been undertaken by IIT, Roorkee on revised guidelines of NCSDP. Signing of Implementation agreement is awaited with Govt. of Maharashtra. A meeting was held on 19.11.2015 with CM of Maharashtra. Minutes of the Meeting are awaited. NBWL recommended the proposal in its 31st meeting held on 12-13 Aug '14. " Approval for incurring expenditure of ` 585.82 Cr. towards Pre-Investment activities (like land acquisition, rerouting of National High way etc.) has been accorded by GOI on 20.11.15. ` 60.0 Cr. has been released on 31.12.15 to UPSIDC towards Ex-gratia and compensatory payment as first installment to facilitate physical possession of 1200.843 acres of the land."
	vi) Malshej Ghat PSS(700MW)			Signing of Implementation agreement			
	vii) Humbarli PSS (400 MW)			S&I works.			
	viii) Khurja STPP (2X660 MW)	Thermal Power Generation	100.00				

Sl. No.	Name of Schemes/ Programme	Objective/ Outcome	Annual Plan (2015-16) Proposed (RBE)	Quantifiable Deliverables/Physical Outputs	Processes/ Timelines	Achivement w.r.t Col(5) as on 31.12.15	Remarks/ Current Status
1	ix) Wind/Solar Power	3 Wind/Solar Power Generation	4 0.087	5	6	7	8 "Wind Power :-EPC Contract for Patan wind farm site, Gujarat with its comprehensive Operation & Maintenance for 20 years has been awarded to M/s Gamesa Renewable Pvt. Ltd, Chennai on 30.10.15. • Agreement with M/s Gamesa Renewable Pvt. Ltd, Chennai has been signed on 14.12.15. Civil work has started at 6-7 locations out of 25 locations. Solar Power: A tripartite agreement amongst SECI,Kerala State electricity Board and THDCIL has been signed on 31.03.15 for development of 50 MW Solar project in Distt. Kasaragod, Kerala. THDCIL had released the initial payment of ` 7.165Cr. to SECI. Action for possession of required land from Kerala Govt. is in Progress. Solar Energy Corporation of India is in process of finalisation of bid document for award of work."
	Total New Projects		117.42				
	TOTAL		1216.24				

SJVN Limited
Achievements upto 31.12.2015

(Rs. in crore)

Sl. No.	Name of Scheme /Programme	Objective / Outcome	Outlay 2015-16		Quantifiable Deliverables	Process/ Time-lines	Achievement as on 31.12.2015	Remarks
			Non Plan Budget	Plan Budget/ Actual				
1	Rampur Hydro Electric Project (412 MW)	Balance works of RHEP		244.15/93.61	Balance payments, claim settlement for Civil Works, Electro Mechanical Works, HM Works	Running payments upto March, 2016	In progress.	
				55.85/19.06	Balance Infrastructural Works		In progress.	
		Sub-Total		300/112.67				
2	Luhri Hydro Electric Project (701 MW)	Construction of LHEP		4.07/0.39	"Hydraulic Model studies "	Running payments upto March, 2016	In progress.	
				17.43/8.37	IEDC	Continuous process	In progress.	
		Sub-Total		21.50/8.76				
3	Dhulasidh HEP (66 MW)	Construction of DSHEP		12.23/0.62	"Acquisition of private land "	Running payments upto February, 2016	The Land acquisition rules have been notified by State Govt. and the entire acquisition process has been started afresh. The soft data of land has been prepared and uploaded on the website as per the requirement of new LARR Act.	
					"Construction of approach road to dam site "	Running payments upto November, 2015	The work will be taken up after Forest Clearance, acquisition of private land and PIB approval.	
					"Civil works "	Running payments upto March, 2016		

Sl. No.	Name of Scheme /Programme	Objective / Outcome	Outlay 2015-16		Quantifiable Deliverables	Process/ Time-lines	Achievement as on 31.12.2015	Remarks
			Non Plan Budget	Plan Budget/ Actual					Complementary Extra-Budgetary Resources
				7.77/2.49	IEDC	Continuous process	In progress.	
		Sub-Total		20/3.12				
4	Devsari HEP (252 MW)	Construction of DHEP		7.28/0.24	Acquisition of private and forest land	Running payments upto March, 2016	"Regarding acquisition of private land - SJVN Management met with Sect. (Revenue) on 05.12.15 for relaxation of 2 years period between Sec 6 & 11 of old LA Act so that award for land compensation and R&R could be made under new LA Act. Regarding diversion of forest land - MoEF has considered the project in FAC meeting held on 31.12.15. Minutes of Meeting have been issued and the GoU is being pursued to reply to the observations of MoEF&CC."	The works delayed due to Hon'ble Supreme Court notification.
					"Shifting of existing power lines of UPCL"	Running payments upto March, 2016	The work shall be taken up after PIB Clearance	
				12.52/3.93	IEDC	Continuous process	In progress.	
		Sub-Total		19.8/3.63				
				13.46/0.20	Diversion of forest land	Running payments upto March, 2016	TEC of the project has been accorded on March 02, 2010. PIB Memo for the project has been submitted to MOP in May, 2013. Environment and Forest Clearance are awaited from MoEF. Pre-construction work can be taken up after acquisition of private land, Environment and Forest Clearance and PIB approval.	

Sl. No.	Name of Scheme /Programme	Objective / Outcome	Outlay 2015-16		Quantifiable Deliverables	Process/ Time-lines	Achievement as on 31.12.2015	Remarks
			Non Plan Budget	Plan Budget/ Actual				
					Mobilization advance and commencement of Civil works	Running payments upto March, 2016		
					Construction of approach road, construction of abutments for bridges and buildings	Running payments upto March, 2016		
			6.54/2.25		IEDC	Continuous process	In progress.	
		Sub-Total	20/2.45					
6	Jakhol Sankari HEP (51MW)	Construction of JSHEP	0.88/0.034		Survey & Investigation work, Consultancy for DPR, bid documents and drawings, EIA/EMP	Running payments upto March, 2016	DPR has been prepared. Environment, Forest and National Board of Wild Life (NBWL) Clearance awaited.	
			4.47/1.303		IEDC	Continuous process	In progress.	
			5.35/1.34					
7	Arun-IIIHEP (900 MW)	Sub-Total Construction of Arun-III HEP	9.93/6.50		Acquisition of land and commencement of Pre-construction activities and Establishment expenses	Running payments upto March, 2016	Notification for land acquisition shall be made after concurrence from PIB.	
			9.93/6.50					
8	Wangchhu HEP (570 MW)	Sub-Total Construction of Wangchhu HEP	3.75/1.76		Getting requisite clearances and Preparation of EIA and EMP reports	Running payments upto March, 2016	Share Holders Agreement agreed in principle and shall be signed after PIB clearance. CEA has vetted the cost for PIB note submitted to MoP on 01.09.2015. A meeting held in MoP on 21.10.15 to review progress of Bhutan projects, wherein a committee has been constituted for finalization/renewal & modernization (R&M) cost of Bhutan Projects.	

Sl. No.	Name of Scheme /Programme	Objective / Outcome	Outlay 2015-16		Quantifiable Deliverables	Process/ Time-lines	Achievement as on 31.12.2015	Remarks
			Non Plan Budget	Plan Budget/ Actual					Complementary Extra-Budgetary Resources
							Matter is under discussion in MoP. JV shall be formed thereafter. EIA/ EMP report is under review in National Environment Commission(NEC). In progress.	
					IEDC	Continuous process		
9	Kholongchhu HEP (600 MW)	Sub Total Construction of Kholongchhu HEP		3.75/1.76 33/17.65	Pre-construction activities (equity contribution)	Running payments upto March, 2016	DPR approved by CEA,Gol on 05.11.12 and by RGoB on 23.05.13. CCEA approval for the project has been obtained on 28.02.14 and Inter-Governmental Agreement between GOI and RGoB has been signed on April 22, 2014. Further, MoU for preconstruction activities has been signed on April 23, 2014 and SHA has been signed on 30.09.14. Joint Venture (JV) company for the implementation of the project has been registered as "Kholongchhu Hydro Energy Ltd" (JV of SJVN & DGPC) in Bhutan on June 12, 2015. In progress.	
					IEDC	Continuous process		
		Sub-Total		33/17.65				

Sl. No.	Name of Scheme /Programme	Objective / Outcome	Outlay 2015-16		Quantifiable Deliverables	Process/ Time-lines	Achievement as on 31.12.2015	Remarks
			Non Plan Budget	Plan Budget/ Actual				
10	Buxar Thermal Power Project (1320 MW)	Construction of Buxar Thermal Power Project		360.2/366.00	Land acquisition	Running payments upto March, 2016	Out of total 1048.69 acres of Private land, approval of 1040.85 acre land has been received from Bihar Govt. Payment amounting Rs. 360.60 crores towards land compensation was released to Bihar State Power Generation Company Limited on 25.11.15.	
					Completion of Barbed Wire Fencing of Project land	15.03.16	The tender has been opened on 29.12.15. Techno-commercial evaluation is in progress.	
					Award of work for preparation of DPR for Railway Siding/ Infrastructure	31.12.15	The Committee has submitted the award recommendations along with other Terms & conditions, etc. for Consultancy works for preparation of DPR & Detailed Engineering along with draft MOU and Board agenda to Competent Authority on 16.11.15; same is under process of approval.	
					Submission of revised DPR of BTTP to MOP	30.09.15	Work for updation of DPR is under progress.	

Sl. No.	Name of Scheme /Programme	Objective / Outcome	Outlay 2015-16		Quantifiable Deliverables	Process/ Time-lines	Achievement as on 31.12.2015	Remarks
			Non Plan Budget	Plan Budget/ Actual					Complementary Extra-Budgetary Resources
					Completion of topographical survey and other site investigation	31.01.16	"LOA issued on 03.03.2014. Survey work of about 2300 acre land completed; further work has been suspended due to the interference of the local villagers for demand of final payment of land as per new Land Acquisition Act. Balance work shall be completed after distribution of compensation to land owners by Distt. Administration, demarcation of land and further handing over of possession of land."	
				21.19/6.43	IEDC	Continuous process	In progress.	
11	Deocha Pachami Coal Block	Sub-Total Development of Deocha Pachami Coal Block		381.39/372.43 0.2/0.00			Infusion of equity of SJVN in JV Company for development	Equity contribution shall be released after formation of JV.
12	Wind Farm Projects	Sub-Total Setting up of Wind Farm		0.2/0.00 5/0.00			Balance Payments for Khirvire Wind Power Project and Award for Wind Resource Assessment Study at Kharaghoda, Gujarat	Payments for Khirvire Wind Power Project shall be released after settlement of pending issues and work for award for Wind Resource Assessment Study is under progress.
13	Doimukh HEP(80 MW)	Sub-Total Construction of Doimukh HEP		5/0.00 3.74/1.89			Preparation of Detailed Project Report including site investigation and surveys	DPR is being prepared.

Sl. No.	Name of Scheme /Programme	Objective / Outcome	Outlay 2015-16		Quantifiable Deliverables	Process/ Time-lines	Achievement as on 31.12.2015	Remarks
			Non Plan Budget	Plan Budget/ Actual				
					Preparation of EIA/EMP report	28.02.16	Work for EIA/EMP study has been awarded to M/s R.S. Envirolink Technologies, Pvt. Ltd, Gurgaon on 18.18.15.	
		Sub-Total		3.74/1.89				
14	Cross Border Power Transmission Company	Equity contribution		0.24/0.00	Infusion of equity in CPTC	Running payments upto March, 2016	Equity contribution shall be released after the receipt of request from JV.	
		Sub-Total		0.24/0.00				
15	Solar Power Projects	Equity contribution and development of Solar Power Project		311.35/0.85	Award of 5 MW Charanka Solar Power Project(Gujarat)	31.12.15	Works commenced at Charanka Solar Park for development of 5 MW Solar PV Power Project.	
		Sub-Total		311.35/0.85			MOU signed with Hindustan Salts Corporation.	
16	Arun-III Transmission Line	Construction of Arun-III transmission line		4.75/2.33	Survey and investigation works, Environment Examination studies	Running payments upto March, 2016	Detailed Project Report (DPR) for the transmission line has been prepared.	
		Sub-Total		4.75/2.33				
17	Construction of Office Building at Shimla and New Delhi	Construction works		30/46.80	Construction of Office Building at Shimla and New Delhi	Running payments upto March, 2016	Super structure has been erected and finishing works are under progress.	
		Sub-Total		30/46.80				

Sl. No.	Name of Scheme / Programme	Objective / Outcome	Outlay 2015-16			Quantifiable Deliverables	Process/ Time-lines	Achievement as on 31.12.2015	Remarks
			Non Plan Budget	Plan Budget/ Actual	Complementary Extra-Budgetary Resources				
18	R&D	R&D		5.00		R&D activities	Running payments upto March, 2016	R&D activities are in progress and payment shall be made after completion of activities.	
		Sub-Total		5.00					
		Total		1175.00/582.91					

An expenditure of Rs. 582.91 crore has been incurred till December 31, 2015 against total Budget Estimate of Rs. 1175.00 crore for the year 2015-16.

NEEPCO Ltd.
Achievements upto 31.12.2015

(Rs. in crore)

Sl. No.	Name of the Scheme / Programmes	Objective / Outcome	Proposed RE 2015-16			Quantifiable Deliverable	Projected Outcome	"Process / Timelines (MOU Very Good target)"	Remarks	"Achievement upto 3rd Qtr (April 2015 to Dec 2015)"
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources					
1	2	3	4	5	6	7	8			
	2		4(i)	4(ii)	4(iii)					
1	Kameng HEP (600 MW), Arunachal Pradesh	Generation of Hydro Power	0.00	26.63	925.80					
						Package-I:		Project Works are under progress		
						Overt Lining HRT Face-II - Target=1200 m	March' 16	Work under progress. Cumulative progress upto December'2015 is 1235 m	"1st Qtr Progress = --- 2nd Qtr Progress = --- 3rd Qtr Progress = 1235 m Total Progress = 1235 m"	
						Bichom Dam Concreteing (Cumulative = 261500 Cum against total quantity = 357490 Cum)	Feb' 16	Work under progress by mean of two crane and shuttering and reinforcement work is going on. Cumulative progress upto Dec'2015 is 271386 Cum.	1st Qtr Progress = 26732 Cum 2nd Qtr Progress = 29883 Cum 3rd Qtr Progress = 27790 Cum Total Progress = 84405 Cum	
						Package-II:				

Sl. No.	Name of the Scheme / Programmes	Objective / Outcome	Proposed RE 2015-16			Quantifiable Deliverable	Projected Outcome	"Process / Timelines (MOU Very Good target)"	Remarks	"Achievement upto 3rd Qtr (April 2015 to Dec' 2015)"
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources					
1	2	3	4	4(ii)	4(iii)	5	6	7	8	
	2		4(i)			Overt Lining at HRT Face III (Cumulative Target=1200 m)	Feb' 16	Boring completed. Lining work is in progress. Cumulative progress upto Dec' 2015 is 1424 m	"1st Qtr Progress = --- 2nd Qtr Progress = --- 3rd Qtr Progress = 1424 m Total Progress = 1424 m"	
						Excavation of Tenga Dam (Cumulative Target=135000 cum)	Dec-15	Excavation work is in progress. Cumulative progress upto Dec' 2015 is 151455 Cum	1st Qtr Progress = 7910 Cum 2nd Qtr Progress = 2475 Cum 3rd Qtr Progress = 15355 Cum Total Progress = 25740 Cum	
						Concreting of Tenga Dam (Cumulative Target=75000cum)	Dec-15	Work in progress. Cumulative progress upto december is 87795 Cum	1st Qtr Progress = 5640 Cum 2nd Qtr Progress = 9226 Cum 3rd Qtr Progress = 6074 Cum Total Progress = 20940 Cum	
						Package-III: HRT Lining, Face VII (Cumulative=2550 m, both Invert and Overt lining)	Oct-15	1st Phase of both overt & invert lining completed. Cumulative progress upto December'2015 of overt lining is 2553 m & invert lining is 2544 m	"1st Qtr Progress = --- 2nd Qtr Progress = --- 3rd Qtr Progress = --- Total Progress = ---"	
						Completion of open excavation of Valve House including Anchor Block-1	Nov-15			

Sl. No.	Name of the Scheme / Programmes	Objective / Outcome	Proposed RE 2015-16			Quantifiable Deliverable	Projected Outcome	"Process / Timelines (MOU Very Good target)"	Remarks	"Achievement upto 3rd Qtr (April 2015 to Dec' 2015)"
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources					
1	2	3	4	4(ii)	4(iii)	5	6	7	8	
	2		4(i)			Completion of Service Bay of Valve House including Roofing	Feb-16			
						Power House & Tail Race Channel:				
						Extension of EOT Crane Beam upto Unit - 4	Aug-15			
						Barrel Concreting upto EL236.7m - Unit - 1	Oct-15	Completed		
						Barrel Concreting upto EL236.7m - Unit - 2	Dec-15	Completed		
						Package-IV				
						"Erection of Steel Liner of Penstock (Cumulative = 3000 RM)"	Jan-16	Work under progress. Cumulative progress upto December 2015 is 2944.376 m	1st Qtr Progress = 115.342 m 2nd Qtr Progress = 286.253 m 3rd Qtr Progress = 270.738 m Total Progress = 672.033 m	
						Erection of WYE-2 and WYE-3	Oct-15	Work Completed. Cumulative Progress upto December 2015 is 155.394 MT	"1st Qtr Progress = --- 2nd Qtr Progress = --- 3rd Qtr Progress = 155.394 MT Total Progress = 155.394 MT"	
						Package-V :				
						Installation of Spiral Casing & Stay Ring of Unit - 3	Jun-15	Completed	....

Sl. No.	Name of the Scheme / Programmes	Objective / Outcome	Proposed RE 2015-16			Quantifiable Deliverable	Projected Outcome	"Process / Timelines (MOU Very Good target)"	Remarks	"Achievement upto 3rd Qtr (April 2015 to Dec 2015)"
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources					
1	2	3	4	4(ii)	4(iii)	5	6	7	8	
	2		4(i)			Installation of Spiral Casing & Stay Ring of Unit - 4	Nov-15	Completed	....
						Extension of EOT Crane to Unit - 4	Sep-15	...	....
						Erection of MIV for Unit-1	Jul-15	Completed		
						Erection of MIV for Unit-2	Aug-15	...	...
						Trial and Final Assembly of Guide Apts including Runner-Unit I	Jan-16	....	....
						Package-VI:				
						Erection of Equipments, Cumulative Target = 400 Nos (Bus Post Isolator-250 nos, CT-35 nos, CB-30 nos, MB-9 nos, HCB Isolator-40 nos and PG Isolator-36 nos)	Jul-15	Work is in progress.		
2	Pare H.E. Project, (110 MW), Arunachal Pradesh	Generation of Hydro Power	0.00	0.00	241.84	Commissioning of the Project	Completion of Project	Construction activities are going on in full swing.		
3	Tuirial HEP (60 MW), Mizoram	Generation of Hydro Power	0.00	91.04	193.52					
						LOT - II (Dam & Spillway)		Project Works are under Progress.		

Sl. No.	Name of the Scheme / Programmes	Objective / Outcome	Proposed RE 2015-16			Quantifiable Deliverable	Projected Outcome	"Process / Timelines (MOU Very Good target)"	Remarks	"Achievement upto 3rd Qtr (April 2015 to Dec' 2015)"
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources					
1	2	3	4	4(ii)	4(iii)	5	6	7	8	
	2		4(i)			Concreting in Spillway(Cumulative 90000 Cum against total quantity of 92500 Cum)	Dec-15	Work under progress. Cumulative progress upto December'2015 is 102389 Cum	1st Qtr Progress = 11061 Cum 2nd Qtr Progress = 7593 Cum 3rd Qtr Progress = 10845 Cum Total Progress = 29499 Cum	
						Main Dam filling including U/S Coffer Dam (Cumulative = 28 lakh Cum against total quantity of 29.13 lakh Cum)	Mar-16	Work under progress. Cumulative progress upto December'2015 is 2430240 Cum	"1st Qtr Progress = 102418 Cum 2nd Qtr Progress = ... 3rd Qtr Progress = 298293 Cum Total Progress = 400711 Cum"	
						Lot-III: Power House and Switchyard				
						Casting of Crane Beam at Service bay	Oct-15	...	...
						Tail Race Channel Excavation-100% completion	Dec-15	...	...
						LOT - IV (Hydro Mechanical Works)				
						Erection of Crest Radial gate - 90% completion	Mar-16	2nd Stage Crest radial gate is in progress.	...	
						LOT - V (Electro Mechanical Works)				
						Completion of 132 KV Switchyard	Jul-15	132 Kv solid core post insulator & 132 kV CVV received at site	...	

Sl. No.	Name of the Scheme / Programmes	Objective / Outcome	Proposed RE 2015-16			Quantifiable Deliverable	Projected Outcome	"Process / Timelines (MOU Very Good target)"	Remarks	"Achievement upto 3rd Qtr (April 2015 to Dec' 2015)"
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources					
1	2	3	4	4(i)	4(ii)	5	6	7	8	
	2		4(i)	4(ii)	4(iii)					
4	Tripura Gas Based Power Project (101 MW), Tripura	Generation of Thermal Power	0.00	0.00	91.44	Commissioning of the Project	Completion of Project	"GT = Jun-15 ST = Aug-15"	(1) GT Synchronised on 11.03.2015, Trial Operation Completed and Commercial Operation declared w.e.f 00:00Hrs on 24th Dec'2015. (2) STG synchronised on 14th January 2016.	
5	Agartala Gas Turbine Plant - CC Extension (51 MW), Tripura	Generation of Thermal Power	0.00	0.00	47.25	Balance payment		March '16	Project commissioned in September 2015	
6	Grid Interactive Solar Power Project (5 MW), TGBP, Tripura	Generation of Solar Power	0.00	0.00	6.78	Commissioning of the Project	Completion of Project	March '16	Project was commissioned in February 2015. Amount kept for balance payment only.	
7	Grid Interactive Solar Power Project (2 MW), Lanka, Assam	Generation of Solar Power	0.00	0.00	2.00	Commissioning of the Project	Completion of Project	March '16	DPR prepared and NIT for EPC contract opened on 04.12.2015 is under evaluation.	
8	Garo Hills Coal Based Power Project (500 MW), Meghalaya	Generation of Thermal Power	0.00	0.00	0.50	Coal Linkage & Initial headway	Coal linkage	March '16	Coal linkage could not be established despite all out effort by NEEPCO.	
9	Survey and Investigation	Preparation of DPR etc.	0.00	0.00	39.20	Survey & Investigation works of the S&I schemes	Survey & Investigation works for preparation of PFR/ DPR	March '16	DPR for Mat HEP is under preparation. DPR for Killing HEP was under preparation which are now stopped as per MOP's direction.	

Si. No.	Name of the Scheme / Programmes	Objective / Outcome	Proposed RE 2015-16			Quantifiable Deliverable	Projected Outcome	"Process / Timelines (MOU Very Good target)"	Remarks	"Achievement upto 3rd Qtr (April 2015 to Dec 2015)"
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources					
1	2	3	4	4	5	6	7	8		
10	Renovation & Modernisation of Kopili Power Station	Renovation & Modernisation	0.00	4(ii) 0.00	4(iii) 45.68	Renovation & Modernisation of some of the project components	Renovation & Modernisation of some of the project components	March' 16	"Installation and commissioning of spillway gate in Khandong Dam for raising of FRL is temporarily stopped due to spilling of water till September 2015. Hence no financial progress of work could be achieved up to Oct. 2015. Materials are under fabrication at manufacturer's shop and some materials are in transit. Delivery is expected soon and erection work shall be started immediately after receipt of materials. Concreting activities at site is in progress. Some work has been spilled over to future based on requirement."	

Sl. No.	Name of the Scheme / Programmes	Objective / Outcome	Proposed RE 2015-16			Quantifiable Deliverable	Projected Outcome	"Process / Timelines (MOU Very Good target)"	Remarks	"Achievement upto 3rd Qtr (April 2015 to Dec' 2015)"
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources					
1	2	3	4	4(i)	4(ii)	5	6	7	8	
11	Joint Venture	Development of power projects	0.00	0.00	56.80	Formation of Joint venture and equity infusion thereof along with S&I works for projects for development in Joint Venture	S&I works and Construction of JV Schemes	March' 16	PFR of Kurung HEP prepared and DPR preparation is in progress. DPR for Siang Upper St-II HEP was under preparation which are now stopped as per MOP's direction. A part of NEEPCO's share of equity infused into the JV Company in respect of Dibbin HEP. 50 MW solar project in M.P. commissioned. 50 MW solar project in Andhra Pradesh is under construction.	
12	Grid Interactive Solar Power Project (3 MW), KHEP, Assam	Generation of Solar Power	0.00	0.00	1.82	Commissioning of the Project	Completion of Project	March' 16	DPR prepared and NIB for EPC contract floated on 23.06.2015 is under evaluation.	
13	RE projects (2500 MW)	Generation of Power from solar/ wind and Small hydro projects	0.00	0.00	100.00					
Grand total (MOP + DoNER):			0.00	117.67	1752.63	(GBS = 117.67 Crs (26.63 (Kameng) + 91.04 (Tuirial (1.07 (Equity)+89.97 DoNER grant)))				
Less DoNER Grant =				89.97						
Grand Total (minus DoNER Grant)=			0.00	27.70	1752.63	(GBS = 27.70 Crs (26.63 (Kameng) + 1.07 (Tuirial))				

Central Electricity Authority Achievements upto 31.12.2015

(Rs. in crore)

Sl.No.	Name of Scheme / Programme	Scope & Objective	Approved outlay 2015-2016	Physical Targets set during the year 2015-16	Achievement during the year 2015-16 (upto 31 st December 2015)	Reasons for variation	Remarks
1	2	3	4	5	6	7	8
1.	Technical Control Planning & Monitoring (Non-Plan)	Monitoring of under construction thermal power projects in the country.	3650.96	Commissioning of 49 Hydro units aggregating to 1691 MW. Sector wise details are given below. Central- 590 MW State - 575 MW Private- 526 MW Total – 1691 MW	Sector wise details are given below. Central- 400 MW State - 570 MW Private- 426 MW Total – 1396 MW	-----	-----
2.	Design & Consultancy (Non-Plan)	To provide technical support in Design & Engineering of power projects to power utilities and adoption of state-of-the-art technologies.	2096.00	At present 19 Nos. of consultancy projects are in hand.	Consultancy services provided to 19 projects in and outside India.	-----	Continuous process
3.	Apprenticeship Training for Engineers (Non-Plan)	Imparting vocational training to Graduate / Diploma holders under the Apprenticeship Act, 1961.	20.00	Training of 36 degree/diploma	Training provided to 1 D/Man and 15 Graduates/ diploma holders		Continuous process
4.	Contribution to International Bodies (Non-Plan)	To keep engineers of CEA abreast of global technological developments in power sector.	0.66	Collective membership of CIGRE, Paris	The Collective membership fee for the calendar year 2015 is due in Feb-Mar 2016	---	Continuous process

Sl.No.	Name of Scheme / Programme	Scope & Objective	Approved outlay 2015-2016	Physical Targets set during the year 2015-16	Achievement during the year 2015-16 (upto 31 st December 2015)	Reasons for variation	Remarks
1	2	3	4	5	6	7	8
5.	Studies & Training (Non-Plan)	To improve performance of Engineers / functionaries.	56.00	Training of 1200 mandays to CEA employees	Training of 1056 mandays provided to 439 employees		Continuous process
6.	Electronic Data Processing & Support System (Non-Plan)	Operation and maintenance of computer systems provided in CEA and its sub-offices. Maintenance of Information Management System (IMS) (Phase-I).	90.00	Operation and maintenance of computer systems provided in CEA & its sub-offices and third year of maintenance of IMS Phase-I which is a continuous process since January 2011.	Maintenance of Computer systems / softwares / peripheral devices in CEA, was carried out and procurement of computer systems / softwares & consumables for their continuous operation and maintenance of IMS Phase-I which is a continuous process were done.	Bill of AMC of computers / peripherals for two quarters will be raised by the concerned contractor in January 2016. Bill of maintenance of IMS Phase-I of about Rs.121 lakhs is pending and is yet to be paid. A few procurement actions initiated in time for completion before December 2015 could not be completed due to factors beyond control.	
7.	National Load Despatch Center (NEPSC) (Non-Plan)	The scheme is related to operation and maintenance of National Electric Power System Information Centre (NEPSC) at New Delhi for collecting vital power system operational data from different Regional Power Committees (RPCs) for use in CEA / Ministry of Power.	9.00	Operation and maintenance of computer systems under the NEPSC scheme in CEA and its sub-offices.	Procurement of Computer Systems / peripheral devices provided in CEA and its sub-offices was carried out and procurement of consumables for their continuous operation was done.	A few procurement actions initiated in time for completion before December 2015 could not be completed due to factors beyond control.	Continuous process
8.	Departmental Canteen (Non-Plan)	To provide subsidized canteen facilities to the employees of CEA	53.20	Welfare measure	The canteen is functioning as a welfare measure to the staff.	--	Continuous process
9.	Administration of Electricity Laws (Non-Plan)	Statutory inspection of Electrical Installations of Central Sector and UTs.	277.64	Inspection of Electrical Installations totaling to 2,60,000 Equivalent MV*	Inspection of Electrical Installations totaling to 2,33,829 Equivalent MV*.	---	Continuous process

*Equivalent MV = 3 x (EHV + HV) + MV + 12 x ckm + 30 x video

Sl. No.	Name of Scheme / Programme	Scope & Objective	Approved outlay 2015-2016	Physical Targets set during the year 2015-16	Achievement during the year 2015-16 (upto 31 st December 2015)	Reasons for variation	Remarks
1	2	3	4	5	6	7	8
10.	All India Load Survey Scheme (Non-Plan)	<p>Collection of electric power survey data and preparation of preliminary forecast of electricity demand.</p> <p>Collection of data of industries having electricity demand of 1 MW and above and having captive power plants.</p>	237.30	<p>To collect data for electricity demand forecasting exercise from States / UTs</p> <p>To collect data from HV / EHV industries having electricity demand of 1 MW and above and having captive power plants.</p>	<p>Data for electricity demand forecasting being collected from States / UTs.</p> <p>Data being collected from industries.</p>	Nil	Continuous process
11.	Regional Coordination (Non-Plan)	<p>The country has been demarcated into five Regions for the purpose of planning and operation of the power system. Regional Power Committees (RPCs) (Erstwhile REBs) have been set up in all the five Regions for facilitating integrated operation of power system in that region for the optimal utilization of the available power resources through functioning of various sub-committees such as Technical Coordination Sub-Committee, Operation Sub-Committee, Commercial Sub-Committee, Protection Sub-Committee and System Studies Sub-Committee etc. The scheme is meant for funding the operations of the Regional Power Committees (RPCs).</p>	597.50	Facilitation of coordinated operation of regional power grids in the country	Facilitation of secured and reliable operation of the Regional Grids.	--	Continuous process

Sl.No.	Name of Scheme / Programme	Scope & Objective	Approved outlay 2015-2016	Physical Targets set during the year 2015-16	Achievement during the year 2015-16 (upto 31 st December 2015)	Reasons for variation	Remarks
1	2	3	4	5	6	7	8
12.	Regional Load Despatching Centres (Non-Plan)	The real time operation of the regional grids is being carried out by the respective RLDCs. Operation planning and coordination functions which facilitate the integrated operation of the power system continue to be with the Regional Power Committees (RPCs). RLDCs and RPCs have to operate in close coordination in achieving the benefits associated with integrated operation of the Regional Power System.	852.84	Facilitation of coordinated operation of regional power grids in the country	Facilitation of secured and reliable operation of the Regional Grids.	--	Continuous process
13.	Strengthening of Regional Electricity Boards (Now known as Regional Power Committees) (Plan)	The objective of the proposal is to provide proper infrastructure support in the form of office building/retariats of NERPC resulting in increased and better integrated operation of the regional grid.	130.00	1. Construction of remaining residential quarters Type – IV (six nos.), Type-II (six nos.) development works & bulk services. 2. Fitting of sanitation, electrical fittings, painting construction of internal road, horticulture works & side development works inside the complex, etc.	In progress	---	

Sl. No.	Name of Scheme / Programme	Scope & Objective	Approved outlay 2015-2016	Physical Targets set during the year 2015-16	Achievement during the year 2015-16 (upto 31 st December 2015)	Reasons for variation	Remarks
1	2	3	4	5	6	7	8
14.	Computerization of PTCC process	Computerisation of processing of the PTCC cases for route approval	10.00	Concurrence of MoP for fresh bidding to select new System Integrator (SI)		---	---
15.	Upgradation of IT facilities in CEA – Phase-II (Plan) (Approved)	Procurement of Desktop Computer, Printer, Multifunctional Device, UPS, Laptop Computer and Microsoft Office	1087.78	Procurement of Desktop Computer, Printer, Multifunctional Device, UPS, Laptop Computer and Microsoft Office through e-Tendering Process. Release of payment for Desktop Computer with MS Office, Printer, Multifunctional Device and UPS.	e-Tenders have been floated for procurement of Desktop Computer with Microsoft Office, Printer, Multifunctional Device, UPS and Laptop Computer with Microsoft Office. Price Bids have been opened for all of the above floated e-Tenders. Letter of Award for Supply & Installation of Printer and Multifunctional Device has been issued.		
16.	Technical Assistance by World Bank to support CEA for appointment of Consultants for addressing Barriers to Energy Efficiency R&M of Coal Fired generating units in India	1.Implementation Support Consultancy (ISC) (M/s ABPS Infra) 2. Review of Institutional Capacity & Implementation of Institutional Capacity Strengthening at CEA. (M/s KPMG)	107.12	Review of Reports/ Output submitted by KPMG - Final Capacity Strengthening Plan for CEA. - To submit the final reports of the study	Reviewed of Reports/ Output submitted by KPMG. Assistance provided in organizing the trainings to CEA officers. - Reviewed Capacity Strengthening Plan for CEA has been submitted by KPMG.		
		3. Study on Review of Experience from Pilot R&M interventions in Thermal Power Stations in India. (M/s WAPCOS)		- Revised draft Report on Review of Experience in Strengthening of O&M Practices. - Revised draft Report on Review of R&M Implementation Experience	- WAPCOS has visited identified TPS during September 2015 to November 2015 to collect the relevant data/information Revised draft Reports are under preparation with WAPCOS.	Capacity Strengthening Plan for CEA is yet to be finalized by KPMG.	Due to Non-availability of sufficient data/ information from concerned thermal power stations/ Utilities.

Sl.No.	Name of Scheme / Programme	Scope & Objective	Approved outlay 2015-2016	Physical Targets set during the year 2015-16	Achievement during the year 2015-16 (upto 31 st December 2015)	Reasons for variation	Remarks
1	2	3	4	5	6	7	8
17.	Basin-wise Review of Hydro-Electric Potential in the country	The study aims to carry out basin-wise review of the hydro potential within the country including identification of New Schemes, wherever possible. Review of hydro potential would help in planning and development of various projects, evacuation arrangement and Environmental Impact Assessment which would enable an optimal harnessing of hydro potential in each river basin.	1150.00	Award of work to executing agency and start of work.	Expression of Interest (EOI) for award of work has been finalized by the Monitoring Committee during the meeting held on 05.01.2016.	MOP vide its letter No. 14/4/2012-H-II dated 30.11.2015 conveyed their approval for award of work for Basin-wise Review of Hydro- electric potential in the Country on limited tendering process by inviting bids from CPSUs/ SPSUs only.	
18.	FRP – Third Party Verification of DISCOMs	The objectives of the proposed scheme is to monitor the implementation of the Financial Restructuring Plan (FRP) of State Discoms through Third Party Verification and for the purpose of recommendation of granting incentives to the State Discoms, as provided in the Scheme.	135.10	Annual verification of Mandatory conditions of state Discoms for the year 2013-14 & 2014-15. Since the Budget amount for the scheme is not yet approved by the Ministry of Power, this target would be shifted to the year 2016-17.	NIL	There is no physical progress so far.	
19.	19 th Electricity Demand Forecast of India	Forecast Electricity Demand Projection for each District/ Circle , State, Union Territory, Region and All India in detail upto end of 13 th Plan and project perspective electricity demand for 14 th & 15 th Plan	110.00	Collection of at least 50% past electricity data & Future development Plans of States/ UTs affecting Electricity Demand	NIL	The process few getting the scheme could not be completed	

20.	National Reliability Council for Electricity	<p>To compute the TTC & ATC of each Transmission corridor in the Grid on a monthly basis.</p> <p>Carry out the audit of the entire grid w.r.t. angular stability analysis, voltage stability and frequency stability on a three yearly basis, also taking into consideration the increased penetration of intermittent renewable sources of energy like wind and solar power.</p> <p>Suggest Special Protection Schemes of the Grid for grid security alongwith protection coordination on All India basis.</p> <p>Up gradation of knowledge in the field of grid reliability in the form of acquiring knowledge of best practices, through interaction with other reliability bodies in USA, Europe and Japan through capacity building.</p> <p>Any other matter related to Reliability of the Grid.</p>	170.00	<p>(i) Calculation of TTC, ATC and TRM on a monthly basis through consultant.</p> <p>(ii) Grid stability & evaluation of system protection schemes of entire Grid.</p> <p>(iii) Upgradation of knowledge in the field of grid reliability theory.</p>	NIL	Un-approved Scheme.	
21.	Comprehensive Planning Model Software (Under the Plan Scheme Upgradation of IT facilities in CEA Phase-II)	Facilitate to carry out generation expansion planning study in the de-regulated environment, aid in the preparation of National Electricity Plan. Further, the Generation Expansion Planning model would serve the needs of CEA for carrying out power absorption studies for various power projects.	100.00	The scheme was approved by MoP on 09-12-2015 with an estimated cost of Rs.250.00 lakhs. Floating of Expression of Interest and Preparation of Bid Document, etc. to be carried out by March 2016.	Floating of Expression of Interest and Preparation of Bid Document is in progress.	---	---

Forum of Regulators Achievements upto 31.12.2015

(Rs. in crore)

Sl. No	Name of Scheme/ Programme/ Project	Sanctioned cost/ Cumulative expenditure	Objective / Outcome	Outlay 2015-16			Quantifiable Deliverables/ Physical Outputs	Processes/ Timelines	Remarks/ Risk Factor	Achievement upto 31 st December, 2015
1	2	3	3	4	5	6	7	8		
		3 (i)	3 (ii)	4(i) Non-Plan Budget	4(ii) Plan Budget	4(iii) Complementary Extra-Budgetary Resources				
	Assistance to Forum of Regulators for Consultancy Capacity Building.	Sanctioned cost: Rs.15 crore over five years	Capacity building by way of training / reorientation of personnel of regulatory commissions and availing consultancy.		1.00		<ul style="list-style-type: none"> 100 officers / staff of electricity regulatory commissions will be trained in a year. Studies to serve as inputs for decision making for the Regulatory Commissions 			Orientation programme is proposed to be held in February 2016. Three studies on (i) Review of Performance of Distribution Utilities (ii) Roadmap for Reduction of Cross subsidy and (iii) Introduction of Competition in Retail Sale of Electricity (Separation of Carriage & Content) completed.

**DEEN DAYAL UPADHYAYA GRAM JYOTI YOJANA (DDUGJY)
Achievements upto 31.12.2015**

(Rs. in crore)

Sr. No.	Name of Scheme/ Programme	Objective/Outcome	Outlay 2015-16			"Quantifiable Deliverables/ Physical Outputs (2015-16)"	Processes/ Timelines	Projected Outcomes	Remarks/risk Factors	Achievement upto 31.12.2015
			Non-Plan Budget	Plan Budget	Complementary Extra-Budgetary Resources					
1	DDUGJY	<p>i. Separation of agricultural and non-agricultural feeders for providing un-interrupted power supply.</p> <p>ii. Strengthening and Augmentation of Sub Transmission & Distribution infrastructure.</p> <p>iii. Metering for feeders, distribution transformer & consumers for energy auditing and reduction of AT&C losses.</p> <p>iv. Providing access to electricity to villages and households.</p> <p>"</p>	4(i)	4(ii) Rs. 4500 Crore	4(iii)	5 "i) Electrification of 17500 villages (including intensive electrification of partially electrified villages) ii) Providing free electricity connections to 14 Lakhs BPL Hhs "	6 After sanction of projects, contracts for execution of projects are to be awarded by States Dis-coms / Power Depts. within 6 months. The projects shall be completed within 24 months from date of award.	7 Will facilitate overall rural development, employment generation and poverty alleviation	8 (a) Remaining villages covered under the scheme are located in far-flung areas involving difficult terrain, poor road connectivity and proximity to naxal affected areas (b) Delay in statutory clearances (Forest/Railway crossing) (c) Right of way issues/ delay in providing land for sub-stations by states (d) Contractual issues between Implementing Agencies (DISCOMs) and Turn-key contractors Further, there can be delay in the programme due to unexpected events, natural calamities etc.	8 "i) Out of allocated budget of Rs. 4500 Crore, Rs. 4211.78 Crore has been drawn from MoP and balance to be drawn by Mar, 2016. ii) During FY 2015-16 (as on 31.12.2015) electrification of 25047 villages (including intensive electrification of partially electrified villages) & electricity connections to 10.45 Lakhs BPL household families have been provided. "

INTEGRATED POWER DEVELOPMENT SCHEME Achievements upto 31.12.2015

(Rs. in crore)

S. NO.	NAME OF SCHEME/ PROGRAMME	OBJECTIVE/ OUTCOME	OUTLAY 2015-16		QUANTIFIABLE/ DELIVERABLES PHYSICAL OUTPUTS	PROJECTED OUTCOMES	PROCESS TIMELINES	REMARKS/ RISK FACTORS	ACHIEVEMENTS UPTO 31-12-2015
			NON-PLAN BUDGET	COMPLEMENTARY EXTRA BUDGETARY RESOURCES					
1	Integrated Power Development Scheme (IPDS) / Restructured accelerated Power Development and Reforms Programme (R-APDRP) [Sl. No. 2 of MoP Schemes]	"IPDS: Strengthening of sub-transmission and distribution network in urban areas including provisioning of solar panels on govt. buildings including net-metering, Metering of feeders/distribution transformers/consumer in urban areas and, IT enablement of distribution sector and strengthening of distribution network. R-APDRP: Attainment of Reliable and verifiable baseline data of energy & revenue and AT&C Loss reduction on sustained basis"	NIL	NIL	"IPDS: Sanction of Projects worth Rs.5000 crore R-APDRP: 1. Part-A: Go Live of 350 Towns 2. Part-B: Completion in 200 Towns 3. Establishment of SCADA Control Centers in 25 Towns 4. Comprehensive Capacity Building under R-AP-DRP including Mandays "	" IPDS- After implementation, the utility should be able to address critical gaps in sub-transmission and distribution network and also achieve the reduction of AT&C loss agreed trajectory between MoP and utilities, till 2019-20. R-APDRP- After implementation of Part-A(IT) in the project area, state power utilities should be able to achieve reliable & verifiable baseline data & hence locate AT&C Loss pockets & further contain them through technical & managerial interventions. Implementation of Part-B shall enable reduction of AT&C losses through technical interventions. The focus of Part-B is AT&C loss reduction to below 15% in project areas. Implementation of SCADA shall reduce power interruptions & improve quality of power supply."	"IPDS- Projects shall be completed in 24 months from the date of LoA. Reduction of AT&C losses as per trajectory till 2019-20. R-APDRP- 5 Years from date of sanction for Part-A (IT), Part-A(SCADA) & Part-B. Further, Five years of AT&C loss monitoring by TPIEA-EA with first year starting an year after establishment of Part-A(IT) system. MoP Steering Committee empowered to enhance timelines on case to case basis."	"IPDS Projects worth Rs.20937 crore sanctioned (including in-principle sanction of Rs. 19071 crore) R-APDRP: 1. Part-A: 270 towns declared Go Live 2. Part-B: Work Completed in 139 Towns 3. SCADA Control Centers: Established in 3 Towns 4. Comprehensive Capacity Building under R-AP-DRP including facilitating Post Go Live activities-AC-complished in 135 Mandays "	

Bureau of Energy Efficiency Schemes

Scheme of Standards, Codes & Labelling for Appliances, Buildings & Energy Efficiency Research Centre

Standards & Labeling Scheme

- Up gradation of standard for room air conditioner, color television and frost free refrigerator from Jan 2016.
- Notification of fuel consumption standards in April 2015.
- Technical committee meetings conducted for passenger cars. Draft Schedule is under preparation.
- Labeling program launched for Variable capacity (Inverter AC) and LED lamps.
- Draft regulation for making color TV, electric water heater and direct cool refrigerator as mandatory labeled appliances have been notified.
- Amendment notification for frost free refrigerator and room air conditioner.
- During Clean Energy Ministerial, Super-Efficient Appliance Deployment (SEAD) award for planar luminaries was successfully completed.
- Operation manual of S&L scheme has been developed.

Energy Conservation Building Codes (ECBC) (2015-16)

- ECBC Cells created in the States of Uttar Pradesh, Karnataka and Chhattisgarh
- The Third round of ECBC Master training programme for ECBC professionals was held at MNIT, Jaipur; CEPT, Ahmedabad and IIIT, Hyderabad. A total of 89 ECBC Master Trainers have been certified so far.
- Performance enhancement of Shram Shakti Bhavan housing Ministry of Power, Ministry of Labour & Employment and Ministry of Water Resources completed.
- Energy Audit carried out for DERC and DLTA buildings.
- Guidelines to implement energy efficiency upgrades in commercial buildings have been developed.
- The following training programmes were conducted across the country
 - ❑ 1 Day Intensive ECBC Training Programme: 8

- ❑ 2 Days Intensive ECBC Training Programme:15

Strengthening of SDAs for Energy Efficiency

SDA Strengthening Scheme (SDA)

- Two national level workshop involving all the SDAs held at Hyderabad and Cochin.
- An amount of Rs.9.66 crores has been disbursed to 22 SDAs in FY 2015-16 till date for demonstration projects, workshops / training programme, publicity / awareness campaign, analysis of energy savings accrued.
- The following achievements are reported by the SDAs out of the funds disbursed
 - ❑ Successful commissioning of 10 demonstration projects.
 - ❑ Workshops/training programmes organized by all the SDAs for the EMs, EAs and other stake holders.
 - ❑ Publicity & awareness campaigns on energy efficiency, workshops / training programmes, database up gradation etc. conducted by all SDAs.
 - ❑ National Media Advisory Committee with representation of SDAs has been constituted for effective propagation of energy efficiency in the Country.

Contribution to SECF

- SECF has been established in 26 states of which 19 states have provided matching contribution

HRD Programme

Demand Side Management (Agriculture, Municipal & SME)

Energy efficiency in Small and Medium enterprises (SME).

- Implementing agencies appointed to support BEE-SME program in five clusters.
- Inception workshops involving stakeholders from cluster associations, units, MSME, regional research and technical institutions and Local Service providers were conducted in five clusters.
- Baseline audits in selected units of Ludhiana, Varanasi and Indore cluster is completed and best energy efficiency technologies are identified for implementation.
- Identification of beneficiary units under progress in Kochi (Seafood), and Pali (Textile) clusters.
- MoUs signed with units in Varanasi Brick, Ludhiana Forging and Indore Food Clusters

- Walk through audits completed in Ludhiana, Pali, Indore & Kochi clusters.
- Energy saving process Technologies identified in Pali , Ludhiana and Indore.
- Adoption of identified Energy Efficient technologies are being undertaken in Ludhiana and Varanasi cluster.

Agriculture DSM

- 14 agriculturally intensive states have been asked to issue mandatory notification for use of star rated pumpsets and to avail benefit of financial assistance proposed for marginal & small farmers.
- Five states i.e. Karnataka, Andhra Pradesh, Utrakhand, Uttar Pradesh and Chhattisgarh submit their willingness to participate in AgDSM scheme.
- A meeting was held with officials of 5 DISCOMs to discuss the implementation of DPRs prepared during XI plan period.
- Assignment for revalidation of two existing DPRs prepared at A.P and Rajasthan DISCOMs is completed. Implementation of pilot project is under consideration in A.P.
- Total 2209 inefficient pumpsets were replaced with star rated pumpsets under first AgDSM pilot project being implemented in Solapur, Maharashtra. First year sampled Monitoring & Verification report for 2209 pumpsets replaced was submitted and second year testing of pumpsets is being carried out at project site in Solapur, Maharashtra.
- Contract between Chamundeshwari Electricity Supply Co. Ltd (DISCOM), Karnataka and M/s EESL is signed for implementation of AgDSM DPR prepared in Mandya District of Karnataka.
- For implementation of pilot energy efficiency projects in Public Health and Rural Drinking water pumping systems, ten states namely Gujarat, Jharkhand, Uttar Pradesh, Bihar, Kerala, Maharashtra, Himachal Pradesh, Chhattisgarh, Mizoram and Punjab submitted proposals.
- Funds are released to six states for carrying out feasibility study and implementation of first demo project in Public Health and Rural Drinking water pumping systems.
- Preparation of feasibility reports for implementation of energy efficiency projects in Public Health and Rural Drinking water pumping systems for selected projects is in progress.
- Financial assistance of 31 lakhs has been sent to SDAs of remaining 4 states on 30th of June 2015.

- Kick off meeting has taken place in Punjab Uttarpradesh, Himachal Pradesh and they have been asked to send the revised proposal and invite the tenders for DPR preparation.
- Kick off meeting is yet to take place in karnataka .Mizoram has been asked to send a revised proposal
- 3rd year M&V has started in Sholapur, Maharashtra.
- Farmers training session took place at KvK baramati Pune in Maharashtra.
- Meeting has taken place with ICAR for organizing farmer's training session in KvKs of 10 states.
- ICAR has provided us list of KvKs of all the 10 states who are willing to organize farmers training sessions.
- National workshop for AgDSM had taken place in Delhi on 18th of January 2016.

Municipal DSM

- One day interactive meeting cum workshops were held in 13 states for implementation of DPRs prepared ion XI plan in one or two Urban Local Bodies (ULBs).
- Funds were released to 6 SDA for implementation pilot projects & engagement of technical experts.
- State level steering committees are formed in 11 states to facilitate the implementation of DPRs.
- Letters were sent to 60 ULBs to select 20 water bodies for carrying out Investment Grade Energy Audits.
- Four states have selected the ULBs for implementation of DPRs prepared during XI plan period.

Capacity building of DISCOMS

- MoU has been signed with 34 selected DISCOMS.
- DSM cell has been established in 31 DISCOMS under this programme.
- Two experts (one technical and one financial) have been provided to each DISCOM under manpower support component under this programme.
- Load research activity has been completed in 18 DISCOMS and on-going in remaining DISCOMS.

- Creation of Master Trainers: 471 officials of 29 DISCOMs have been trained as Master Trainers under Training for Trainers activity.
- 16 States have notified their DSM regulations so far.

EAP Schemes - BEE-GEF-WB-MSME Project

- As part of Awareness and Outreach efforts, the major activities performed are as follows:
 - ❑ Workshops for facilitating financing among banking sector have been conducted pan India
 - ❑ SMS campaign to inform and motivate MSMEs for Energy Efficiency, new media like magazines also featured cover story on this project
 - ❑ Around 150 case studies developed on energy efficiency initiatives taken up in clusters
- Knowledge Management & sharing
 - ❑ Web based Knowledge Portal – under process
 - ❑ Toll free Helpline – under process
 - ❑ Inter-cluster Knowledge exchange programme
- Demonstration of Rotary vacuum dryer as an EE option for Hot air Trey Dryers in Chemical industry is done and workshop conducted for replication of technology
- New clusters have been identified based on success achieved in the previous clusters and work begun in some of them towards replication of energy efficiency initiatives.
- The equipment based documentaries covering boilers in chemical, Induction furnaces in Foundries, Fuel switch option in forging furnace, DG sets and Air Compressors are converted to other languages for better uptake in other clusters.
- Study to “Evaluate and demonstrate the Economic Losses due to Rewinding of LT Motors and Propagate Best Practices of Motor Rewinding in MSMEs”.

Energy Conservation

Under this head the schemes of Energy Conservation Awards, National Mission For Enhanced Energy Efficiency and Scheme of Painting Competition on Energy Conservation is included.

(a) Energy Conservation Awards 2015

BEE coordinates the Energy Conservation Award scheme of the Ministry of Power. The annual awards recognize innovation and achievements in energy conservation by the Industries, buildings, hotels, hospitals, railways, state designated agencies, aviation, manufacturers of BEE star labeled appliances, municipalities and thermal power station and also raise awareness that energy conservation plays a big part in India's response to reducing global warming through energy savings. The Awards were given away for the first time in December 14, 1991, which is celebrated as 'National Energy Conservation Day' throughout the country.

The responses among the industrial and commercial units have become very encouraging as is evident from the increasing participation level (from 123 in 1999 to 963 in 2015).

The participating units of EC Award 2015 have collectively invested Rs. **2384 crores** in energy conservation measures, and achieved a monetary savings of Rs. **2928 crores** last year. The participating units have also saved electrical energy of **2598 Million kWh**, which is equivalent to the energy generated from a **486 MW** thermal power station. In other words, these participating units have avoided the installation of power generating capacity equivalent to 486 MW thermal power stations in 2014-15, which would otherwise have been required to meet the power demand of these units.

(b) Painting Competition on Energy Conservation 2015

Ministry of Power and Bureau of Energy Efficiency have undertaken National Campaign on Energy Conservation 2015. Under this campaign, Painting Competition on Energy Conservation at School and State level was executed. In order to strengthen the campaign, higher classes of 7th, 8th and 9th standards were also included from 2013 onward in addition to existing classes of 4th, 5th and 6th Standards. The National Painting Competition on Energy Conservation 2015 was a resounding success. Across the country, about **105.25** lakhs students from all over the country have participated. This participation was about 75% higher than that in the previous year.

(c) National Mission for Enhanced Energy Efficiency (NMEEE)

The achievements are enumerated below :

- PAT cycle I has completed on 31st March 2015 under which targets were given to 478 DCs in 8 industrial sectors to reduce their Specific Energy Consumption through a notification on 30th March, 2012. The scheme became mandatory from 1st April, 2012.
- The SEC reduction targets aim to secure 4.05% reduction in the total energy consumption of these industries totaling an energy saving of 6.686 million tonne of oil equivalent.
- Sector Specific Form-1 (annual energy return form) along with Sector specific Draft Normalization Factors to streamline the monitoring and verification (M&V) process has been prepared.
- 13 sector specific forms for 8 sectors have been developed. Normalization documents with examples for easy application of normalization factors by DCs have been developed for 8 sectors.
- Draft Monitoring and verification protocols for all 8 sectors have been developed and are under finalization.
- Process of accreditation of Energy Auditors who will be engaged to execute the M&V process of DCs to assess their performances has been initiated and as of around 200 Accredited Energy Auditor are listed with BEE.
- Several PAT notification workshop has been successfully organized all over the country to disseminate the rules as well as the methodology of the PAT scheme.
- 16 nos of workshops were conducted to educate and inform DCs about the new sector specific forms and normalization factors.
- Several rounds of visits were made to representative DCs of sector for capacity building of manpower engaged with energy management.
- Monitoring and Verification reports of 350 DCs out of 478 DCs has been evaluated by BEE.
- Under EEFP, MoU has been signed by BEE with M/s. PTC India Ltd, M/s. SIDBI, HSBC Bank, Tata Capital and IFCI Ltd to promote financing for Energy Efficiency projects.
- Under Super-Efficient Equipment program, ceiling fans have been identified as the first appliance to be adopted. Seven fan manufacturers have been selected through a competitive bidding process,
- In PRGFEE a consortium of RECPDCL-REC-EESL has been appointed as Implementing Agency (IA) for operationalization of PRGFEE in July 2015. PRGFEE rules have been vetted by Ministry of Law and the process of issue of notification is in process. (also chek if this is correct)

- Under VCFEE, MoP has constituted Board of Trustees for VCFEE. The VCFEE trust was registered on 7th July 2015. VCFEE rules has been vetted by Ministry of Law. Further action is in process.
- Under EEFP, MoUs have already been signed by BEE with M/s. PTC India Ltd, M/s. SIDBI, Tata Capital and IFCI Ltd to promote financing for Energy Efficiency projects. BEE has signed MoU with Indian Banks' Association for training program on EE financing for SCBs. This training program was launched in June 2015. In NECA 2015, two new categories for FIs and best business models were introduced for encouraging financing in EE sector.

SMART GRID
Achievements upto 31.12.2015

(Rs. in crore)

S. No.	Name of Scheme/ Programme	Objective/Outcome	Outlay 2015-16			Quantifiable Deliverables/ Physical Outputs	Projected Outcomes	Process/ Time-lines	Remarks/ Risk Factors
			4(i) Non-Plan Budget	4(ii) Plan Budget	4(iii) Complimentary Extra Budgetary Resources				
(1)	(2)	(3)	(5)	(6)	(7)	(8)			
1	Smart Grid		-	40.00	Nil	-	The smart grids will help us in better asset as well as generation capacity utilisation. Thus Smart Grids shall help us Serve more consumers per Megawatt of generation and will be an important tool for achieving the goal of 24X7 access of power for all by 2019 and GoI is committed to implementing these technologies for the larger benefit of consumers.	-	The disbursement of funds to utilities shall depend upon the placement of award for system Integrator by utilities and subsequent completion of project milestones.

National Electricity Fund (NEF)- Interest-Subsidy Scheme Achievements upto 31.12.2015

(Rs. in crore)

S.No.	Name of Scheme/ Programme	Objective / outcome	Outlay 2015-16 (Rs. in cr)			Quantifiable deliv- erables/ Physical Outputs	Projected Outcomes	Process Time- lines	Re- marks/ Risk Factors	Achievements upto 31-12- 2015
			Non- Plan Budget	Plan Budget	Compli- mentary Ex- tra Budgetary Resources					
1.	National Electric- ity Fund (Interest Subsidy Scheme)	1.To mitigate the fund- ing gap and to pro- mote capital invest- ment in the distribution sector(Public and Pri- vate Power Utilities) by providing interest subsidy, linked with reform measures, on loans taken by public and private power util- ities for various capital works under distribu- tion projects. 2. To provide inter- est subsidy and other charges aggregating to Rs 8466 Crs for a period of 14 years on loans availed by the distribution util- ities in both Public and Private sector.	NIL	20.00	NIL	1. Evaluation of pre-eligibility condi- tions & eligibility pa- rameters for discoms. 2. Put up the interest subsidy claim propos- al to steering commit- tee for consideration. 3. Release of ap- proved interest subsi- dy to discoms/lenders		2015-16		Interest Subsi- dy of Rs.651.32 lakhs released to the eligible Discoms on the recommendations of the 06 th Steering Com- mittee Meeting of NEF

Financial Support for Debt Restructuring of State Owned Discoms Achievements upto 31.12.2015

(Rs. in crore)

S. No.	Name of Scheme/ Programme	Objective / outcome	Outlay 2015-16			Quantifiable deliverables/ Physical Outputs	Projected Outcomes	Process Timelines	Remarks/ Risk Factors	Achievements upto 31-12-2015
			Non-Plan Budget	Plan Budget	Complimentary Extra Budgetary Resources					
1.	Financial Support for Debt Restructuring of State Owned Discoms (Transitional Finance Mechanism) a) Reduction in AT&C Losses b) Capital Reimbursement Support	To ensure the financial viability of State Owned Discoms	NIL	74.20	NIL	Reduction in AT&C losses beyond the trajectory specified under RAPDRP with base year 2010-11 Reduction in Gap between ARR & ACS and consequently accumulated losses		Fulfillment of mandatory conditions under Part C of the Scheme The benchmark of AT&C losses would be the base year 2010-11 on the audited accounts of Discoms by CAG	So far, none of the participating States could fulfill conditional ties as envisaged in the FRP Scheme. Thus, either incentive of Capital Reimbursement Support could not be availed by any State.	

Transmission Schemes Achievements upto 31.12.2015

(Rs. in crore)

S. No.	Name of the Scheme/Programme	Objective/ Outcome	Outlay 2015-16			Quantifiable Deliverables/ Physical Outputs	Projected Outcomes	Processes/ Timelines	Remarks/Risk Factors
			4(i) Non Budget	Plan Budget	4(ii) P l a n Budget 250					4(iii) Comple-mentary Extra-Budgetary Resources -
1.	2.				5.	6.	7.	8.	
I	Strengthening of 220KV Transmission System from Alusteng (Srinagar) to Leh (via Drass, Kargil&Khalsti 220/66 KV sub-station) and 66 KV interconnection system for Drass, Kargil, Khalsti and Leh sub-stations in J&K		Nil		NITs for all the packages awarded and work on transmission lines/substations are in progress. Physical progress of the transmission line as on 31.12.2015 briefly as below: Towers erected: 353/1034 Foundations completed: 365/1072 Stringing: Nil/330 km.	(i) 220kV Alusteng-Drass S/C line &66kV Drass-Drass(RGGVY) D/C line and associated Sub-station works at Alusteng&Drass: (ii) 220kV Drass – Kargil S/C line &66kV Kargil – Kargil (RGGVY) 2xD/C line and associated Sub-station works at Drass&Kargil (iii) 220kV Kargil – Khalsti S/C line &66kV Khalsti – Khalsti (RGGVY) D/C line&associated Sub-station works at Kargil&Khalsti. (iv) 220kV Khalsti – Leh S/C line &66kV Leh – Leh (RGGVY) 2xD/C line& associated Sub-station works at Khalsti&Leh	July, 2017 July, 2017 Aug, 2017 Aug, 2017		
II	Strengthening of Transmission System in the States of Arunachal Pradesh & Sikkim.		Nil	150	-	NITs for all packages have been floated and packages are expected to be awarded progressively from March, 2016 onwards.		Dec., 2018	
III	NER Power System Improvement Project in six North Eastern States excluding Arunachal Pradesh and Sikkim		Nil	250		NITs for all packages have been floated and packages are expected to be awarded progressively from March, 2016 onwards.		Dec., 2018	

**Comprehensive Award Scheme
Achievements upto 31.12.2015**

(Rs. in crore)

S. N.	Name of Scheme/ Programme/ Project	Objective/Outcome	Outlay 2015-16				5	6	7	8
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Quantifiable/ Physical Outputs					Projected Outcomes	Processes/ Timelines	Remarks/ achievement upto December, 2014
1	2	3	4 (i)	4 (ii)	4 (iii)	5	6	7	8	
	Comprehensive Award Scheme for power sector	To inculcate competitive spirit and to motivate higher level of efficient and economic operation in the field of construction and maintenance of thermal/ hydro/ transmission projects, implementation of distribution reforms, rural distribution franchisees, environment performance, community development and safety records. However, the expected returns cannot be quantified.	-	1.00	-	Improvement in performance of generation, transmission and distribution environment management	To contribute in achieving reliable, affordable and quality power supply to all	The awards for 2015-16 are to be given in a function to be held in March, 2016	The award Distribution Function for the year 2013-14 was held on 4 th June, 2015. The award Distribution Function for the year 2014-15 is proposed to be held in February-March 2016	

Power System Development Fund (PSDF) Achievements upto 31.12.2015

(Rs. in crore)

Sl No	Name of Scheme/ Programme/ Project	Objective/Outcome	Outlay 2015-16 (Rs. in crore)			5 Quantifiable/ Physical Outputs	6 Projected Outcomes	7 Processes/ Timelines	8 Remarks/Risk factor
			Non Plan Budget	Plan Budget (Rs in crore)	Complementary Extra Budgetary Resources				
1	Power System Development Fund (PSDF)	Power System Development Fund (PSDF) has been constituted with the approval of Cabinet. This Fund is to be utilized for funding of proposals related to safe operation of Grid like installation of protection system, renovation and modernisation (R&M) of transmission and distribution system for relieving congestion etc.	4 (i)	4 (ii) 175	4 (iii)	PSDF is to be utilized for funding proposals related to safe operation of Grid like installation of protection system, renovation and modernisation (R&M) of transmission and distribution system for relieving congestion etc.	The schemes would be improved network stability and security of grid at the state, regional and national level. This will improve Operational Reliability, Enhancement of System Security, Fast clearance of system faults and, Easy and accurate analysis of faults, reactive power management for efficient operation of the grid, etc.	As per guidelines/procedures for disbursement of funds from PSDF, first disbursement of funds for the schemes approved for funding from PSDF, first installment of the grant shall be disbursed to the entities after signing of the agreement and placement of necessary letter of award (LOA). There was inordinate delay by the entities in fulfilling the requirements for disbursement of funds by the entities.	

<p>Scheme for utilization of gas based generation capacity.</p>	<p>Make available Regasified Natural Gas (RLNG) for improving utilization of the stranded gas based generation capacity. The increased gas based power generation from these stranded plants would have a multiplier effect on the economy and also help in restoring the investors' confidence in the power sector besides preventing these assets from becoming NPA.</p>	<p>1200</p>	<p>Increase gas based generation will help promote grid stability, mitigate the regional imbalance in power generation, ease the congestion in transmission corridors and provide the much needed balancing power for integrating renewable sources based power generation into the grid, particularly in view of their fast ramp down and ramp up capability.</p>	<p>The gas based power plants will be required to indicated within the target PLF the additional power that would be generated (in MUs) and the support required per unit of generation (in Rs. Per Unit) from PSDF with a commitment that the net price to Discoms is not more than the target price or as decided. The stranded gas based power plants may also require financial relief from Banks / Financial Institutions (Fis) so that they are above to meet their debt service obligations and do not become NPAs.</p>	<p>The scheme for utilization of gas based generation capacity from importing spot RLNG in 2015-16 and 2016-17 for the stranded gas based power plants as well as for plants receiving domestic gas upto the target PLF selected through a reverse process. The scheme provides for financial support from PSDF (Power System Development Fund).</p>	<p>The plants under the scheme were selected through a transparent reverse e-bidding process. Auctions for the 1st phase (1st June to 30th September, 2015) of PSDF Support to gas based power plants was held in the months of May, 2015 which has resulted in revival of a cumulative gas based generation capacity of 10,270 MW resulting in generation of additional 5.70 Billion Units of electricity during peak summer months from 1st June, 2015 to 30th September, 2015. Auctions for 2nd Phase (1st October, 2015 to 31st March, 2016) of PSDF Support to gas based power plants held on 15th and 16th September, 2015 will help in revival of 13 stranded and 5 partly stranded gas based generation plants with installed capacity of 11,717.72 MW. This will result in generation of additional 12.47 billion units of electricity during the period from 1st October, 2015 to 31st March, 2016. Auction for the 3rd Phase i.e. 1st April to 30th September, 2016 of the scheme is under process</p>
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**MOP Secretariat
Achievements upto 31.12.2015**

(Rs. in crore)

Sr. No.	Name of Scheme/ Programme/ Projects	Objective/ Outcome	Outlay 2015-2016 Non-Plan (Rs. In Crores)	Quantifiable Deliverables/ Physical Outputs	Processes/ Timelines	Projected Outcomes: Date of completion of the project	Remarks/ Risk Factor	Achievement
1.	2.	3.	4.	5.	6.	7.	8.	9.
		4(i)	4(ii)		!			
		Non-Plan Budget	Plan Budget					
	MOP Secretariat (Main) Minor work	To develop infrastructure in the Ministry	0.50	To develop infrastructure in the Ministry		Smooth functioning of the Ministry	NIL	10% mandatory cut. i.e. 0.055 Targets have been achieved.

Sr. No.	Name of Scheme/ Programme/ Projects	Objective/ Outcome: Sanctioned cost/ Cumulative expenditure from beginning till 31.3.2017	Outlay 2015-2016			Quantifiable Deliverables/ Physical Outputs	Processes/ Timelines	Projected Outcomes: Date of completion of the project	Achievement / Comments	Remarks
1.	2.	3.	4.	5.	6.	7.	8.	9.		
			4(i) Non-Plan Budget	4(ii) Plan Budget	4(iii) Complementary Extra-Budgetary Resources					
	(c) Office Expenses (Plan)	(b) A Plan scheme with duration of five years (2012-2017) was initiated with a aim to acquire infrastructural facilities to improve the functional efficiency of the Ministry like purchase of computer & other IT related peripherals, implementation of e-governance & e-mission project, maintenance of infrastructural facility acquired during 11th Plan.	1.24 (Computerization & office Automation)				Following are the major benefits when the scheme is fully implemented Implementation of e-governance & e-office mission made project development of centralized data base system. Availability of data in electronic version. Proposed plan Scheme will be completed by 31.3.2017	Rs. 1.16 incurred till 29.01.2016 The target laid down in the scheme for 2015-2016 have been fully achieved		

Sr. No.	Name of Scheme/ Programme/Projects	Objective/ Outcome	Outlay 2015-2016 Non-Plan			Quantifiable Deliverables/ Physical Outputs	Processes/ Timelines	Projected Outcomes: Date of completion of the project	Remarks/ Risk Factor	Achievement
			4(i) Non-Plan Budget	4(ii) Plan Budget	4(iii) Complementary Extra-Budgetary Resources					
1.	2.	3.	4.	5.	6.	7.	8.	9.		
	MOP Secretariat (Main) Office Expenses	To meet the requirement of office expenses i.e. <ul style="list-style-type: none"> i. Payment of telephone bills ii. office automation items iii. Purchase of stationary items. iv. Requirements of Central Registry Section v. Various consumable. vi. Maintenance and purchase of petrol for staff cars etc. vii. AMC of items i.e. electric, telephone, furniture etc 	3,10 RE	(a) To meet the requirement of office expenses i.e. Payment of telephone bills, stationary items, Maintenance of office equipment, petrol for staff car and other Electric items etc.		S m o t h functioning of office	NIL	Rs. 2.90 incurred till 29.01.2016 Target have been achieved		

Chapter – V

Financial Reviews

Details of Annual Plan outlay 2016-17 :

An amount of Rs.79883.57 crore is the approved outlay by the Ministry of Finance for the year 2016-17 comprising of Rs.67683.57 crore as IEBR and Rs.12,200 crore as GBS. The details are as under :-

Sl. No.	Organisation/ Schemes	Internal Resources	Bonds/ Debentures	Ecb/ Supplier Credit	Others	Total (lebr)	Total (Gbs)	Total Plan Outlay
1	2	4	5	6	7	8	9	10
A.	PSUs (including assistance to CPSEs in the form of GBS)							
1	NTPC	10210.08	14202.12	5587.80	0.00	30000.00	0.00	30000.00
2	NHPC	1792.51	1798.21	0.00	0.00	3590.72	367.00	3957.72
3	PGCIL	5500.00	14000.00	2500.00	500.00	22500.00	0.00	22500.00
4	D.V.C.	0.00	1600.00	0.00	1702.57	3302.57	0.00	3302.57
5	THDC	705.49	0.00	441.88	252.00	1399.37	40.00	1439.37
6	SJVNL	600.00	0.00	0.00	400.00	1000.00	0.00	1000.00
7	NEEPCO	169.53	407.26	79.12	235.00	890.91	166.13	1057.04
8	PFC	0.00	5000.00	0.00	0.00	5000.00	0.00	5000.00
	TOTAL (A)	18977.61	37007.59	8608.80	3089.57	67683.57	573.13	68256.70
Note : The GBS indicated included in column 9 is categorized as a Scheme of Assistance to CPSEs and has been shown along with IEBR to reflect estimated total capital outlay from CPSEs For the purpose of budgeting the GBS is reflected under Scheme of Assistance to CPSEs								
B	Statutory Authorities							
1	CEA	0.00	0.00	0.00	0.00	0.00	10.00	10.00
2	FOR	0.00	0.00	0.00	0.00	0.00	1.00	1.00
	TOTAL (C)	0.00	0.00	0.00	0.00	0.00	11.00	11.00
C	Research & Training							
1	CPRI	0.00	0.00	0.00	0.00	0.00	125.00	125.00
2	NPTI	0.00	0.00	0.00	0.00	0.00	33.00	33.00
	TOTAL (D)	0.00	0.00	0.00	0.00	0.00	158.00	158.00
D	Deen Dayal Upadhyaya Gram Jyoti Yojana	0.00	0.00	0.00	0.00	0.00	3000.00	3000.00
E	Integrated Power Development Scheme	0.00	0.00	0.00	0.00	0.00	5500.00	5500.00
F	Conservation and Energy Efficiency	0.00						

1	Bureau of Energy Efficiency	0.00	0.00	0.00	0.00	0.00	64.00	64.00
i.	Energy Conservation	0.00	0.00	0.00	0.00	0.00	100.00	100.00
	TOTAL (G)	0.00	0.00	0.00	0.00	0.00	164.00	164.00
G	Strengthening of Power Systems							
1	Smart Grid	0.00	0.00	0.00	0.00	0.00	30.00	30.00
2	Green Energy Corridor	0.00	0.00	0.00	0.00	0.00	0.10	0.10
3	Interest Subsidy to National Electricity Fund	0.00	0.00	0.00	0.00	0.00	25.00	25.00
4	Financial Support for Debt re-structuring of DISCOMS	0.00	0.00	0.00	0.00	0.00	0.01	0.01
5	Power System Operation Company (POSOCO)	0.00	0.00	0.00	0.00	0.00	81.21	81.21
6	220 KV Transmission Line from Srinagar to Leh via Kargil	0.00	0.00	0.00	0.00	0.00	250.00	250.00
7	Power system Improvement in North Eastern States excluding Arunachal Pradesh and Sikkim	0.00	0.00	0.00	0.00	0.00	234.00	234.00
8	Strengthening of Transmission Systems in the States of Arunachal Pradesh and Sikkim	0.00	0.00	0.00	0.00	0.00	273.00	273.00
9	Funds for Evaluation Studies and Consultancy		0.00	0.00	0.00	0.00	0.01	0.01
10	Comprehensive Award Scheme for Power Sector	0.00	0.00	0.00	0.00	0.00	0.54	0.54
	TOTAL (H)	0.00	0.00	0.00	0.00	0.00	893.87	893.87
H	Power System Development Fund (PSDF)	0.00	0.00	0.00	0.00	0.00	1900.00	1900.00
	GRAND TOTAL	18977.61	37007.59	8608.80	3089.57	67683.57	12200.00	79883.57

The CPSU-wise and scheme -wise break-up of 12th Plan are as under:-

Rs.In Crore

Sl No.	Activity/ Organization		IEBR	GBS	Total
A	Investment in PSUs				
1	NTPC Ltd	Estimates	219612.50	0.00	219612.50
		Achievements	80762.15	0.00	80762.15
2	NHPC	Estimates	27312.04	2056.91	29368.95
		Achievements	9918.29	1535.36	11453.65
3	POWERGRID	Estimates	102034.00	0.00	102034.00
		Achievements	82004.00	0.00	82004.00
4	DVC	Estimates	14509.65	0.00	14509.65
		Achievements	9134.15	0.00	9134.15
5	THDC India Ltd	Estimates	6781.86	516.20	7298.06
		Achievements	1859.38	205.24	2064.62
6	SJVNL	Estimates	10400.00	0.00	10400.00
		Achievements	2994.24	0.00	2994.24
7	NEEPCO	Estimates	5866.79	406.18	6272.97
		Achievements	4953.85	289.41	5243.26
	Total (A)	Estimates	386516.84	2979.29	389496.13
		Achievements	191626.06	2030.01	193656.07
B	MoP Schemes (other than CPSUs)				
1	Rajeev Gandhi Grameen Vidyutikaran Yojana (RGGVY)	Estimates	0.00	23397.44	23397.44
2	Restructured Accelerated Power Development Reforms Programme (R-APDRP)	Estimates	0.00	10830.00	10830.00
		Achievement	0.00	2478.44	2478.44
3	Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY)	Estimates	0.00	2500.00	2500.00
4	Integrated Power Development Scheme (IPDS)	Estimates	0.00	0.00	0.00
5	National Electricity Fund (NEF)	Estimates	0.00	3601.00	3601.00
6	Strengthening of Transmission System in the States of Arunachal Pradesh & Sikkim	Estimates	0.00	3014.00	3014.00
7	Energy Conservation+Bureau of Energy Efficiency	Estimates	0.00	2499.91	2499.91
8	220 Kv Transmission Line from Srinagar to Leh via Kargil	Estimates	0.00	1628.00	1628.00
		Achievement	0.00	583.54	583.54
9	Central Power Research Institute (CPRI)	Estimates	0.00	1368.90	1368.90
		Achievement	0.00	137.94	137.94
10	Financial Debt Restructuring of DISCOMs	Estimates	0.00	1000.00	1000.00
		Achievement	0.00	0.00	0.00
11	Other MoP Schemes	Estimates	0.00	1460.46	1460.46
		Achievement	0.00	739.15	739.15
	Total(B)	Estimates	0.00	51299.71	51299.71
		Achievement	0.00	14812.64	14812.64
	Total GBS (A) + (B)	Estimates	386516.84	54279.00	440795.84
		Achievement	191626.06	16842.65	208468.71

The actual expenditure vis-à-vis Budget Estimates/Revised Estimate in the 1st to 4th year of XII Plan in respect of PSUs and schemes under the administrative control of Ministry of Power:-

1st, 2nd, 3rd & 4th year of XII Plan

(Rs. In crore)

Sl No	Schemes/ Organizations	BE 2012-13	RE 2012-13	Actual 2012-13	BE 2013-14	RE 2013-14	Actual 2013-14	BE 2014-15	RE 2014-15	Actuals 2014-15	BE 2015-16	RE 2015-16	Actual 2015-16 upto 31.12.15 \$
1	A. Investment in CPSUs*												
		2	3	4	5	6	7	8	9	10	11	12	13
1	NTPC	20995.00	20995.00	19925.53	20200.00	20200.00	21797.24	22400.00	22400.00	15381.93	23000.00	25000.00	16156.50
2	NHPC	4097.00	2967.83	3307.26	3449.59	3058.12	3219.03	3223.46	2545.76	1754.31	4179.89	4228.00	1874.93
3	Power Grid	20000.00	20000.00	20360.00	20000.00	20000.00	23158.00	20000.00	20000.00	17297.00	20000.00	22500.00	16030.00
4	DVC	5571.69	4180.29	3366.65	4080.82	3515.97	3004.63	2764.99	2286.73	1264.09	3682.93	3088.32	1280.87
5	THDC	565.39	362.35	291.17	579.86	331.96	404.33	856.68	774.19	501.12	1580.31	1246.24	674.75
6	SJVNL	796.00	796.00	842.15	964.08	964.08	1054.13	1091.93	720.22	451.89	1175.00	800.00	582.91
7	NEEPCO	1271.79	1180.36	1062.62	1989.61	1661.77	1558.19	1087.98	1595.08	1256.16	1291.60	1780.33	892.99
8	Total-A	53296.87	50481.83	49155.38	51263.96	49731.90	54195.55	51425.04	50321.98	37906.50	54909.73	58642.89	37492.95
	B. MOP Schemes (other than CPSUs												
1	Rajeev Gandhi Grameen Vidyutikaran Yojana (RGGVY)**	4900.00	2492.02	697.94	4500.00	3137.65	2938.52	5144.09	2886.38	2817.72	0.00	0.00	0.00
2	Restructured Accelerated Power Development Reforms Programme (R-APDRP)***	3114.00	1500.00	1234.49	575.00	700.00	648.70	1261.04	595.26	509.13	0.00	0.00	0.00

	Deen Daya Upadhayaya Gram Jyoti Yojana	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	500.00	500.00	0.00	4500.00	4500.00	4211.80
	Integrated Power Development Scheme (IPDS)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	569.54	1002.05	569.54
3	National Electricity Fund (NEF)	72.00	0.00	0.00	151.92	10.00	0.00	0.00	0.00	0.00	50.69	1.00	0.00	20.00	7.00	6.51
4	Strengthening of Transmission System in the States of Arunachal Pradesh & Sikkim	145.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	100.00	175.18	100.00	100.00	150.00	150.00	150.00
5	Energy Conservation	200.00	55.00	37.00	564.45	16.00	16.00	16.00	16.00	16.58	107.65	40.72	16.58	60.00	55.00	54.82
6	BEE	200.00	58.00	44.10	193.41	77.60	66.72	66.72	66.72	0.00	139.55	10.00	0.00	50.00	45.00	36.43
7	220 Kv Transmission Line from Srinagar to Leh via Kargil	200.00	10.00	0.00	226.00	65.40	65.40	65.40	65.40	268.14	268.14	268.14	268.14	250.00	250.00	250.00
8	Central Power Research Institute (CPRI)	265.00	80.00	40.36	298.73	20.00	17.76	17.76	17.76	70.62	295.53	79.82	70.62	125.00	42.00	0.00
9	National Power Training Institute (NPTI)	5.09	5.09	5.00	11.00	6.00	3.63	3.63	3.63	8.89	60.52	12.70	8.89	40.00	30.60	12.60
10	Financial Debt Restructuring of DISCOMs	0.00	0.00	0.00	1500.00	125.40	0.00	0.00	0.00	0.00	400.00	1.00	0.00	74.20	1.00	0.00

11	Power System Improvement Project in NE Region (except Sikkim & Arunachal Pradesh)	0.00	0.00	0.00	0.00	0.00	62.35	0.00	200.00	150.00	100.00	250.00	250.00	158.44
12	Central Electricity Authority Scheme for Power System Development to be met from PSDF	19.08	6.53	4.23	37.20	5.35	2.12	46.29	1.00	200.00	0.00	30.00	11.73	1.00
	Power Sector Support to NCT of Delhi	0.00	0.00	0.00	0.00	0.00	0.00	0.00	200.00	200.00	200.00	0.00	0.00	0.00
13	Other MoP Schemes	7.46	6.54	2.98	6.74	4.24	1.86	8.50	8.50	5.90	1.43	76.00	7.29	2.11
	Total-B	9127.63	4214.18	2066.10	8065.45	4230.99	3760.71	8958.18	5166.20	4092.51	6494.74	7726.67	5946.11	
	* The figures include GBS and IEBR													
	** This scheme has been subsumed with Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) from the FY 15-16 onwards.													
	*** This scheme has been subsumed with Integrated Power Development Scheme (IPDS) from the FY 15-16 onwards.													

Chapter – VI

Review of Performance of Statutory and Autonomous Bodies under the administrative Control of the Ministry of Power

The following autonomous bodies and statutory bodies are under the administrative control of the Ministry of Power:-

Autonomous Bodies	Central Power Research Institute (CPRI)	
	National Power Training Institute (NPTI)	
Statutory Bodies	Non-Commercial	Commercial
	Appellate Tribunal for Electricity (APTEL)	Damodar Valley Corporation (DVC)
	Central Electricity Regulatory Commission (CERC)	Bhakra Beas Management Board (BBMB)
	Joint Electricity Regulatory Commission for Goa & UT except Delhi	
	Bureau of Energy Efficiency (BEE)	

Salient performance highlights of the above mentioned organizations are as follows:-

1. Central Power Research Institute (CPRI) :

CPRI has rendered commendable service to India's Power Sector for over four decades and is poised to attain greater heights in future. In order to achieve the targeted growth in GDP, a rapid expansion of power availability in different parts of the country is required to meet growing industrial, agricultural and household needs. The technological imperatives of 800 kV class EHV transmission, HVDC and flexible AC transmission, integrated grid operation, growing use of alternative energy sources and nuclear power stations, etc., have to be met. The challenges posed by the power sector are going to increase almost exponentially and there is a need for a strong multi-disciplinary organization committed to nation building, improving safety and reliability of electrical supply systems and providing desired services to utilities and equipment manufacturers and encouraging research in new technologies in the power sector.

The details of achievement upto 31.12.2015 in respect of CPRI under major schemes are given in **Annexure-I**.

2. National Power Training Institute (NPTI) : The targets and achievements against

performance parameters are as follows

S No	Performance Parameters	2015-16	
		Target	Actual (up to Dec 2015)
1	No of Trainees in Regular Programs	17,500	12,751
2	No of Trainee Weeks(T-W)	1,20,000	90,363
3	Revenue Earnings(Rs. In crore)	48.80	42.36
4	Non-Plan Expenditure (Rs.-in crore)	41.52	32.68

The details of achievements are at **Annexure-II**.

3. Appellate Tribunal for Electricity (APTEL)

The Appellate Tribunal for Electricity established by the Central Government under Section 110 of the Electricity Act, 2003 has been made operational w.e.f. 21st July, 2005. As on 31.12.2015, 2636 number of Appeals (205 in the year 2005; 278 in the year 2006; 160 in the year 2007; 185 in the year 2008; 202 in the year 2009; 206 in the year 2010, 201 in the year 2011, 265 in the year 2012, 333 in the year 2013, 300 in 2014 and 301 in 2015) have been registered, of which, 2208 have already been disposed of by the Tribunal. Apart from the above appeals, 4463 other IAs, Petitions etc. have been received in the Tribunal, out of which 4059 have been disposed of by the Tribunal. The details are at Annexure-III.

4. Central Electricity Regulatory Commission (CERC)

(i) Legal Proceedings:

318 Petitions were disposed of during 2015-16 (up to 31st December, 2015).

The achievements during 2015-16 in respect of CERC are given at **Annexure-IV**.

(ii) Notification of Regulations

The details of regulations notified during 2015-16 are at Appendix to **Annexure-IV**.

5. Joint Electricity Regulatory Commission for Goa & UT except Delhi

The achievements with reference to the Plan scheme 'Joint Electricity Regulatory Commission for Goa & UT except Delhi' is at **Annexure V**.

6. Bureau of Energy Efficiency (BEE)

The achievements upto 31.12.2015 in respect of Bureau of Energy Efficiency and Energy Conservation are at **Annexure – VI & VII respectively**. The highlights of Bureau of Energy Efficiency and Energy Conservation Schemes are also given at **Appendix to Annexure VI & VII respectively**.

7. Damodar Valley Corporation (DVC)

During the year 2015-16, RTPS U # 1 & 2 (2 X 600 MW) is expected to be commercially operational in March'2016. The installed capacity of DVC now stands at 6357.20MW comprising of Thermal 6210 MW (excluding Joint Venture projects) and Hydel 147.20 MW.

The other details of performance/achievement during the year 2015-16 of DVC are given in the **Annexure-VIII**.

8. Bhakra Beas Management Board (BBMB)

During the year 2015-16 (upto 31.01.2016), the generation from BBMB Power Houses has been 10412 MUs against the CEA target of 7986 MUs (Target for entire year 2015-16 is 9076 MUs). The Power House-wise plant availability of BBMB for the year 2015-16 (upto 31.01.2016) is as follows-

Bhakra Left Bank 100%, Bhakra Right Bank 99.74%, Ganguwal 64.80%, Kotla 64.51%, Dehar 97.35% and Pong 99.37%. The overall availability of BBMB Power Houses is 97.08%. The power generated at BBMB Power Houses is being evacuated through BBMB power evacuation system running into 3,705 circuit kilo metres length of 400/220/132/66 kV transmission lines and 24 substations. The availability of transmission system during the year 2015-16 (upto 31.01.2016) was 99.72%.

**Central Power Research Institute (CPRI)
Achievements upto 31.12.2015**

(Rs. in crore)

Sl. No.	Name of Scheme/ Programme	Objective/ Outcome	Outlay 2015-16			Quantifiable Deliver-ables/ Physical Outputs	Projected Outcomes	Process/ Timelines	Remarks/ Risk Factors	Achievements upto 31.12.2015
1	2	3	4			5	6	7	8	9
			4(i) Non Plan Budget	4(ii) Plan Budget	4(iii) Complementary Extra Budgetary Resources					
A.	Ongoing Spill over Schemes									
1.	Augmentation of test facilities for optimization of 800 kV AC/DC transmission system	To augment test facilities for conducting optimization studies & transmission systems of 800 kV/AC & 800 kV DC ratings.	-	-	-	-	Commissioning of AC test system	-		The indoor laboratory construction is in progress. After closing/termination of two civil/structural contracts, action is initiated for getting all the balance works done through fresh award of contract. The NIT for the same is floated, work is awarded and the materials to be provided to the contractor are to be delivered by the suppliers. The DC test system has been successfully commissioned during Sept. 2013. Work has been handed over to BSNL in August 2015. The detailed requirements have been forwarded to BSNL for making estimate.

2.	<p>E q u i t y participation in M/s. NHPTL for the Project: On line High Power Short Test Circuit Test Facility</p>	<p>Objective was to become a Joint Venture partner in the NHPTL Company for establishing High Power Test facilities</p>	-	-	-	-	-	-	-	<p>-Estimate of balance civil works & electrical works is under preparation by BSNL Civil Wing and is expected to be completed by 15th January 2016. Electrification work is also included in the scope of the work given to BSNL. An amount of Rs.36.52 Cr. has been spent so far. Extension of project duration upto June 2016, had been sought from Ministry of Power vide our letter no.CPRI/P&C/4/1/XI PLAN/2015 Dated 23rd Dec. 2015. NHPTL communicated the revised equal equity share of each JV Partner as Rs.30.40 Crore. Hence, additional release of balance grant of Rs.6.40 crore for payment to NHPTL towards balance equity contribution of CPRI as JV partner.</p>
3.	<p>Augmentation of High Voltage, Diagnostic Relay, Vibration, LED test facilities and infrastructure protection</p>	<p>Upgradation of High Voltage facilities at Bangalore and Bhopal units and establish E M I / E M C & LED test facilities</p>	-	-	-	-	-	-	-	<p>Out of the 9 project components, 8 have been completed. The remaining project component i.e. EMI/EMC Test Facility is delayed and needs 20 months time to complete. Equipments & Instruments control have been received excepting chamber absorber parts. Construction of High Voltage Laboratory at STDS, Bhopal, LED Test laboratory building, construction of Laboratory building at Regional Testing Laboratory at Noida, Additional Test Bay at Short Circuit Laboratory, CPRI, Bangalore, have been completed.</p>

Construction of Wake Simulation Laboratory completed.										
Building for Extension work of CCAR and Guest Houses at CPRI, Bangalore are completed.										
Construction of compound wall for office & colony at Bangalore & Hyderabad have been completed.										
Construction of EMI/EMC laboratory got delayed due to contractor problems and contract is terminated in October 2013. Floating of revised NIT for carrying out pending works, however due to exorbitant quote, the tender is rejected. Now, it is handed over to CPWD as deposit work. CPRI has awarded Consulting work to IIT, Madras.										
The design report along with drawing has been submitted in December 2015.										
CPWD is making preliminary estimate after discussion with IIT-Madras as per the new design. The estimate is expected to be submitted by CPWD to CPRI in January 2016. Once estimate is approved by CPRI, work will commence.										
An amount of Rs.61.44 Cr. has been spent so far.										
Project duration extension sought upto August 2017 vide our letter No.CPRI/P&C/4/1/XI Plan/2015 dated 9 th Nov. 2015.										

B. XII Plan approved project	1. Augmentation Projects of CPRI under XII plan (Outlay: Rs.105.90 Cr.)	-	7.32	-	Tendering and placing of order, Delivery of some major equipments, initiation of civil works	Tendering and placing of order	April 2015 to March 2016	Project approved by MoP on 25 th February 2014 for Rs.105.90 Cr.	Project approved on 25 th February 2014 by MoP. Seven project components are in various stages of progress as follows:- 1. Upgradation of High Voltage/ Ultra High Voltage Test Facilities- The orders have been placed and L.C. opened for procurement of Impulse Voltage Generator worth Rs.1.25 Cr. and Impulse Current Generator worth Rs.11.19 Cr. The order has been placed for Civil works worth Rs.2.6 Cr. CPWD has commenced the civil work. 1. Upgradation of Real Time Digital Simulator ETAP software worth Rs.64.50 Lakhs had been procured, installed. Tender has been opened for RTDS up-gradation worth Rs.8.00 Cr. and is in advanced procurement stage. 2. Augmentation of Energy Meter & Calibration Laboratory- Rs.10.00 Cr. worth equipment are in different stages of procurement process. Civil work has been handed over to CPWD and civil work estimation is in progress. 3. Augmentation of Protocol & Meter Testing Laboratory- In order not to loose the warranty, it is proposed to initiate the procurement of items under 12 th plan depending upon the progress of the parent building. Rs.1.00 Cr. worth equipment are under progress.
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<p>Procurement of remaining items shall be processed based on the progress of the parent building. The civil work has been handed over to CPWD and estimation is in progress.</p>	<p>4. Establishment of test facility for (i) Solar Based Grid Tied Inverter Systems (upto 500kVA and (ii) Solar PV modules (upto 500Wp</p>	<p>Procurement of Rs.12.00 Cr. worth Grid Tied Inverter system is in advanced stage. All other major items are in advanced procurement stage. Civil work worth Rs.7.55 Cr. had been commenced by CPWD.</p>	<p>5. A u g m e n t a t i o n , Modernization & Capacity Addition of Battery, Ingress Protection and Illumination test facilities –</p>	<p>Items worth Rs.4.5 Cr. worth equipment order has been placed. Rs.3.0 cr. worth equipment is under advanced procurement stage. Civil work has been handed over to CPWD and the work will commence soon after payment of 1/3 value of estimate to CPWD.</p>
				<p>6. A u g m e n t a t i o n & Modernisation of Diagnostics, Cables, Capacitors, Temperature Rise, Environmental Test Facilities –</p> <p>All the items identified under this project are in advanced procurement stage.</p>

2.	Augmentation of High Short Test Facilities by installation of two additional 2500 MVA Generators and associated equipment (Outlay: Rs.640.00 Crs.)		-	3.68	-	NIT and placing order	NIT and placing order	April 2015 to March 2016	<p>Project approved by MoP on 5th January 2015 & is under implementation.</p> <p>1. Augmentation of High Power Short Circuit Test Facilities by installation of two additional 2500 MVA Generators with associated equipment at High Power Laboratory CPRI, Bangalore</p> <p>NIT for appointment of Overseas technical consultant had been floated. Evaluation of tender is in progress.</p> <p>Technical Specification for all major equipment proposed to be procured are under preparation.</p> <p>Components for replacement of existing 2500 MVA S.C. Generator have been initiated.</p> <p>2. Establishment of 350 MVA Online short Circuit Test station at UHVRL</p> <p>NIT for appointing consultant is in progress. Initial site survey conducted with TSTRANSCO officials. Feasibility study under progress. Specifications are being prepared for all major items to be procured.</p> <p>Establishment of short circuit testing transformers, Excitation systems for existing generator</p> <p>Indents have been raised for all major items to be procured. 10 major items to be procured are under advanced stages of procurement.</p> <p>Order have been placed for equipment worth Rs.25.00 Lakhs. Remaining items to be procured are under progress.</p>
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3.	Establishment of New Test Facilities (Outlay: Rs. 356.10 Cr.)		-	25.00	-	Tender-ing and placing of order	Tender-ing and placing of order	April 2015 to March 2016	<p>(i) a) Establishment of transmission line tower test station and associated test facilities. Specifications have been finalized for all major items. Civil work shall be handed over to CPWD soon.</p> <p>b) Augmentation of test facilities at STDS, Bhopal. All the items to be procured worth Rs.18.00 Cr. are in different procurement stages. Civil work will be handed over to CPWD soon.</p> <p>c) Augmentation of Pre-Qualification test facilities at CPRI. Two major items namely Upgradation of Impulse Generator and 600kV, 4200KVA outdoor AC test system to be procured, the specifications have been finalized and tender shall be floated soon.</p> <p>d) Establishment and Augmentation of short circuit test facilities at CPRI, Bangalore. All the items to be procured worth Rs.8.00 Cr. are under different stages of procurement.</p> <p>(ii) a) Relocation and Augmentation of Thermal Research Centre of CPRI. Land has been allotted by Govt. of Maharashtra and Land Possession formalities are completed and CPRI took the possession of the land. Action plan to establish the facilities have been drafted.</p> <p>b) Enhancing Test Facilities of oil testing Laboratories and Relocation of Regional Testing Laboratory, CPRI, Kolkata.</p>
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												(v) Smart Grid Research Laboratory. All items to be procured including softwares, the specifications have been finalized and tenders shall be floated soon. Civil works estimation is in progress.	
4.	Plan R & D (Rs. 80.00 Crs.)												
	1. Plan R & D	To help address challenges in power/ electricity, including reliability efficiency, safety and environment	-	2.00	-	Implementation of the projects approved by RC Committee	April 2015 to March 2016 Implementation of the projects approved by RC Committee.	Project approved by MoP on 11 th June 2014	Ten Projects have been taken up for implementation.				
	2. Research Scheme on Power (RSoP)	Project proposals are invited from academia, power utilities, industries as well as research institutes and are approved by an expert committee on research scheme on power	-	3.00	-	Implementation of the projects approved by EC on RSoP	April 2015 to March 2016 Implementation of the projects approved by EC on RSoP	Project approved by MoP on 11 th June 2014	Nine Projects have been taken up for implementation				
	3. National Perspective Plan (NPP)	NPP projects are taken for undertaking projects identified under National Perspective Plan as approved by SCR&D, MoP	-	4.00	-	Implementation of the projects approved by SCR&D.	April 2015 to March 2016 Implementation of the projects approved by SCR&D.	Project approved by MoP on 11 th June 2014	Two Projects have been taken up for implementation				

**NATIONAL POWER TRAINING INSTITUTE (NPTI)
Achievements upto 31.12.2015**

(Rs. in crore)

Sl. No	Name of Scheme	Objective/ Outcome	Outlay 2015-16			Quantifiable Deliverables/ Physical Outputs	Project Outcomes	Processes/ Timelines	Remarks/ Risk Factors
			Non-Plan	Plan	Complementary Extra Budgetary Resources				
1	2	3	4(i)	4(ii)	4(iii)	5	6	7	8
	Modernization & up gradation of Training Facilities at Corporate Office, Faridabad			6.80		Training activities will be increased after completion of the scheme.	Work is under progress	2016-17	
	B-New Scheme								
	Setting up of National Power Training Institute at Alappuzha, Kerala			12.00		Training activities will be increased after completion of the scheme.	Work is under progress	2016-17	
	Renovation, Modernization and Augmentation of training infrastructure of Nines Institute of NPTI			15.20		Training activities will be increased after completion of the scheme.		2016-17	
	Setting up of National Power Training Institute at Shiv puri. M.P			6.00		Training activities will be increased after completion of the scheme.		2016-17	
	Non-Plan (Pension Fund)		6.40						
	Total		6.40	40.00					

Appellate Tribunal For Electricity (APTEL) Achievements Upto 31.12.2015

(Rs. in crore)

Sl. No.	Name of Scheme/ Program	Sanctioned Cost/ Cumulative expenditure from 1.4.2015 to 31.12.2015	Objective/ Outcome	Outlay 2015-16		Quantifiable Deliverables/ Physical outputs	Projected Outcomes	Processes/ Timelines	Remarks/ risk factor	Achievements
				Non-Plan Budget	Complementary extra-budgetary Resources					
1	2 Appellate Tribunal for Electricity	3(i) Sanctioned Cost: Not applicable Expenditure from 01.04.2015 to 31.12.2015: Rs.801.00 lakhs	3(ii) To facilitate expeditious resolution of disputes in the power sector at the appellate level Further, the Tribunal will also function as Appellate Tribunal under Petroleum and Natural Gas Regulatory Board Act.	4(i) 9.39	4(iii) 4	5 Total number of appeals pending for final disposals as on 1 st January, 2015 is 353. Apart from this, 279 IAs/ Petitions etc are also pending for disposal/ admission. These were likely to be disposed off along with fresh appeals being filed during 2015-16. The above details are inclusive of cases under the Petroleum and Natural Gas Regulatory Board Act.	6 N.A.	7 Spread through-out the year		Following are disposed of during 1.4.2015 to 31.12.2015: Appeal – 147; Other IAs, etc. - 236;

Central Electricity Regulatory Commission (CERC) Achievements Upto 31.12.2015

(Rs. in crore)

S. No.	Name of Scheme/ Programme	Objective/ Outcome	Outlay 2015-16			Quantifiable deliverables/ physical outputs	Projected Outcomes	Processes/ Timeline	Remarks/Risk Factors	Achievement upto 31.12.2015
			4(i) Non-Plan Budget (Fig. in lakh)	4(ii) Plan Budget	4(iii) Complementary Extra-Budgetary Resources						5
1	Central Electricity Regulatory Commission	3				6	7	8	9	
1	Central Electricity Regulatory Commission		Against the BE of Rs.44.33crore for 2015-16, an expenditure of Rs. 24.29crore has been incurred upto 31.12.2015	Nil		400 Petitions are likely to be disposed during the year 2015-16. The 14 and 2014-16 petitions include 19 for the Tariff period of 2009-14 and 2014-16, applications for grant of transmission & trading licenses, adoption of tariff through competitive bidding, miscellaneous cases involving grid and monitoring the functioning of the Power Exchanges and adjudication matters.	Issue of orders for the year periods 2009-14 and 2014-16 will result in determination of firm tariff of the generating stations and transmission systems regulated by the Commission. Grant of licence and adoption of tariff in column-5 are expected to be achieved during the year 2015-16.	The procedures of framing Regulation as also of passing orders by CERC that the targets set will be achieved. However, the possible constraints which have the potential of slippages on time line include the complexities involved in some cases.	318 Petitions were disposed off during the period from April 2015 to December 2015.	

<p>Introduction of Ancillary Service</p>	<p>Implementation of the transmission projects which have been awarded through competitive bidding. Grant of trading licences will facilitate the trading of electricity through bilateral transactions and power exchanges and will promote movement of electricity from the surplus regions to the deficit regions of the country. S p e e d y disposal of the miscellaneous petitions will result in smooth and secure operation of the grid and development of the electricity market in a dispute free manner . Monitoring of the functioning of the power exchanges will ensure that these market institutions functions in a transparent and robust manner and command the confidence of the market participants.</p>	<p>Regulations on the subject have been issued on 13.08.2015. Detailed procedure has been submitted by POSOCO and the same is under consideration in the Commission.</p>
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<p>The Commission on 23.10.2015 notified draft CERC (Deviation Settlement Mechanism and related matters) (Third Amendment) Regulations, 2015. The Commission through this amendment has revised deviation limit from 50 MW to 250 MW depending on the peak demand of the States as a one time measure up to 01.04.2017 so that by that time the States must firm up their strategy for maintaining load generation balance in the wake of increasing share of renewable energy. Public hearing was held on 23.12.2015 and the Commission is in process of finalizing the Third Amendment Regulation.</p>									
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						<p>Implementation of National Transmission Tariff framework</p>	<p>This would promote effective utilization of assets across the country and accelerated development of the new transmission capacities.</p>			<p>With effect from 1st July 2011 the sharing of transmission charges and losses have been implemented in the country under the Point of Connection (PoC) regime as per the Sharing of Inter State Transmission Charges and Losses Regulations 2010. Three amendments have been issued in November 2011, March 2012 and April 2015. Orders for determination of PoC rates have been issued in June 2011, March 2012, November 2012, March 2013, June 2013, September 2013, December 2013, March 2014, June 2014, September 2014 and December 2014.</p> <p>Staff paper on Transmission Planning, Connectivity, Long Term Access, and Medium term open Access and other related matters published on 19.09.2014. Comments were received from the stakeholders.</p>
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<p>A Task Force has been formed to frame Regulations on Transmission Planning. A Committee has been formed to review the staff paper & give recommendation for framing draft Regulations.</p>	<p>A Task Force under the Chairmanship of Ms. Neeraj Mathur, Ex-Chairperson, CEA has been formed to give input on draft Regulations for Communication System in Power Sector.</p>	<p>A Committee has been formed to compute stranded transmission capacity & relinquishment charges.</p>	<p>Report of the Central Advisory Committee, Subcommittee under the Chairmanship of Shri RV Shahi, Former Power Secretary, Government of India on Congestion in Transmission was submitted in June 2015 to the Commission.</p>

				Implementation of Renewable Energy Certificate (REC) framework.	This is aimed at promoting investment in Renewable Energy segment and enabling compliance of Renewable Purchase Obligation (RPO).	During the period from 1.4.2015 to 31.12.2015, 62 RE Generators/ Projects have been accredited and 58 generators/ projects have been registered for REC.
				Framework for forecasting, in scheduling of the infirm and imbalance Renewable Energy settlement of infirm Renewable Energy generation sources.	This will help in integration of the infirm Renewable Energy sources like wind and solar into mainstream grid operation.	Final Framework comprising of Amendments to IEGC & DSM Regulations was notified on 07.08.2015. Model Regulations for States presented to Forum of Regulators on 30.09.2015.
				Implementation of regulatory Information Management System (RIMS) in CERC.	This will enable the Commission to manage the data base/ information more effectively for decision making.	The phase 1 of RIMS has been implemented. RIMS Phase II and Tariff module under review.

1. The Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) (Third Amendment) Regulations, 2015

The Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010 came into force from 1.7.2011. The regulations envisaged sharing of transmission charges based on the principle of distance, direction and quantum of flow as envisaged in the National Electricity Policy. Based on the experience gained on the operation of the regulations, the Commission proposed the third amendment and after following the due procedure of previous publications, Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) (Third Amendment) Regulations, 2015, was notified in the official Gazette on 7.4.2015. The said regulations came into force from 1.5.2015.

2. Central Electricity Regulatory Commission (Open Access in inter-State Transmission) (Third Amendment) Regulations, 2015

The Commission notified the Central Electricity Regulatory Commission (Open Access in inter-State Transmission) Regulations, 2008 for facilitating and regulating the short term open access to inter-State Transmission System (ISTS). On the basis of the experience gained, the Commission felt it necessary to amend the regulations to rationalize certain provisions for smooth operation of the short term open access. Accordingly, the Commission has notified the Central Electricity Regulatory Commission (Open Access in inter-State Transmission) (Third Amendment) Regulations, 2015 after following due procedure.

3. Central Electricity Regulatory Commission (Grant of Connectivity, Long Term Access and Medium Term Open Access to Inter-State Transmission (Fifth Amendment) Regulations 2015

- (i) Government of India has planned to set up Solar Parks for promotion of Solar Power. Ministry of New and Renewable Energy (MNRE) vide letter dated 12th December, 2014, conveyed the intent of Government of India to provide a framework for setting up at least 25 Solar Parks in different parts of the country with a target of over 20,000 MW installed capacity of solar power in a span of 5 years from 2014-15 to 2018-19. The Solar Park Developer shall be the nodal agency in developing the Solar Park and to provide infrastructure facilities to the Solar Energy Generators to be located in the Solar Park.
- (ii) Implementation of the transmission facilities for evacuation of power from the RE Generators to be located in the solar park requires that an eligible entity shall apply for connectivity and long term access to the Central Transmission Utility in terms of the Central Electricity Regulatory Commission (Grant of Connectivity,

Long-term Access and Medium-term Open Access in inter-State Transmission and related matters) Regulations, 2009 (Connectivity Regulations). Since, only the generating company or a bulk consumer is eligible to apply for connectivity and long term access under the Connectivity Regulations, the Commission felt the need to make the Solar Power Park Developer an eligible entity for applying for grant of connectivity and long term access. Accordingly, the Connectivity Regulation was amended to make the Solar Power Park Developer an eligible entity for applying for connectivity and long term access. As per the Regulations, any company which has been authorised by the Central Government to act as Solar Power Developer shall be eligible to apply for connectivity and long term access.

4. Central Electricity Regulatory Commission (Grant of Regulatory Approval for execution of Inter-State Transmission Scheme to Central Transmission Utility) (First Amendment) Regulations, 2015

Government of India has planned to set up Solar Parks for promotion of Solar Power. Ministry of New and Renewable Energy (MNRE) vide letter dated 12th December, 2014, conveyed the intent of Government of India to provide a framework for setting up at least 25 Solar Parks in different parts of the country with a target of over 20,000 MW installed capacity of solar power in a span of 5 years from 2014-15 to 2018-19. The Solar Park Developer shall be the nodal agency in developing the Solar Park and to provide infrastructure facilities to the Solar Energy Generators to be located in the Solar Park.

Implementation of the transmission facilities for evacuation of power from the RE generators to be located in the solar park requires that an eligible entity shall apply for connectivity and long terms access to the Central Transmission Utility in terms of the Central Electricity Regulatory Commission (Grant of Connectivity, Long-term Access and medium-term Open Access in inter-State Transmission and related matters) Regulations, 2009 (Connectivity Regulations). Since, only the generating company or a bulk consumer is eligible to apply for connectivity and long term access under the Connectivity Regulations, the Commission felt the need to make the Solar Power Park Developer an eligible entity for applying for grant of connectivity and long term access. Accordingly, the Connectivity Regulation was amended to make the Solar Power Park Developer an eligible entity for applying for connectivity and long term access. As per the Regulations, any company which has been authorized by the Central Government to act as Solar Power Developer shall be eligible to apply for connectivity and long term access.

5. Central Electricity Regulatory Commission (Miscellaneous Provisions) Order, 2015

- (i) Central Electricity Regulatory Commission (CERC) was established under Section 3 of the Electricity Regulatory Commission Act, 1998. Section 3 (2) of the said Act provides that the Central Commission shall be a body corporate

by the name aforesaid having perpetual succession and a common seal. The Commission notified the seal of the Commission vide Central Electricity Regulatory Commission (Miscellaneous Provisions) Order, 2015.

- (ii) The Electricity Act, 2003 came into operation w.e.f. 10.6.2003 and repealed the Electricity Regulatory Commission Act, 1998. Under Section 76 (2) of the said Act, the Central Commission established under the Electricity Regulatory Commission Act, 1998 shall be deemed to be the Central Commission for the purposes of the Electricity Act, 2003. Section 76 (3) of the Electricity Act, 2003 provides that the Central Commission shall be a body corporate by the name aforesaid having perpetual succession and a common seal.
- (iii) The Commission has decided to change the seal of the Commission. The seal has been developed in consultation with the National Institute of Design. The Commission has adopted the new seal which has been notified in the official gazette on 1.6.2015.
- (iv) The new seal of the Commission will be officially used w.e.f. 24.7.2015 which is the foundation day of CERC.

6. Central Electricity Regulatory Commission (Power System Development Fund) (First Amendment) Regulations, 2015

Government of India, Ministry of Power has sanctioned the “Scheme for utilization of gas based power generation capacity” vide memorandum No. 4/2/2015-Th.I dated 27th March, 2015. The said scheme provides for support from PSDF as under:

Support from Power System Development Fund (PSDF): support by the government of India shall be made available to the Discoms through a transparent reverse e-bidding process. Further, the support from PSDF will be made available only for the incremental PLF above the base PLF achieved by the gas based plant during April-Jan, 2014-2015 and up to the target PLF. The incremental generation will be as defined by Empowered Pool Management Committee (EPMC)

The scheme envisages supply of imported spot “e-bid RLNG” to the stranded gas based plants as well as the plants receiving domestic gas up to the target PLF of 25% for five (5) monsoon months and 30% for seven (7) non-monsoon months for FY 2015-16 and 2016-17 for stranded plants as well as plants receiving domestic gas.

In order to facilitate implementation of above requirements of the Scheme, the Commission has notified amendment to Central Electricity Regulatory Commission (Power System Development Fund) Regulations, 2014 (PSDF Regulations).

The 1st Amendment to PSDF Regulation provides that any scheme sanctioned by the Central Government in the interest of development of power system which

requires support from PSDF as part of the scheme shall be eligible for assistance from PSDF.

7. Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) (Fourth Amendment) Regulations, 2015

Government of India, Ministry of Power has sanctioned the “Scheme for utilization of gas based power generation capacity” vide memorandum No. 4/2/2015-Th.I dated 27th March, 2015. The said scheme provides for exemption from transmission charges and losses as under:

“5. Contribution by different stakeholders:

.....

(x) Exemption from transmission charges and losses for stranded gas based power projects on lines of solar power on generation from the e-bid RLNG Transmission charges and transmission losses of the CTU and / or STU as the case may be, for the incremental gas based power so produced by the e-bid RLNG are waived off, on the lines of solar power.

In order to facilitate implementation of above requirement of the scheme sanctioned by Government of India, the Commission has notified amendment to CERC (Sharing of inter-state transmission charges an losses) Regulations, 2010 (Sharing Regulations).

The 4th Amendment to the Sharing Regulations provides that no transmission charges and losses for the use of ISTS network shall be charged to incremental gas based generation from e-bid RLNG for the years 2015-16 and 2016-17.

8. Central Electricity Regulatory Commission (Fees and Charges of Regional Load Despatch Centre and other related matters) Regulations, 2015

The Central Electricity Regulatory Commission (hereinafter “the Central Commission”) in exercise of its power under section 61 read with section 178 of the Electricity Act, 2003 (the Act) has made a Central Electricity Regulatory Commission (Fees and Charges of Regional Load Despatch Centre and other related matters) Regulations, 2015 (hereinafter referred as “2015RLDC Regulations”) for the control period 2014-19 vide notification dated 18.5.2015. The Commission had earlier notified the similar Regulations for fixation of RLDC Fees and Charges for the control period 2009-14 which expired on 31.3.2014.

The 2015 RLDC Regulations provides the financial and operational rules for determining the fees and charges of Regional Load Dispatch Centre (“RLDC”) and National Load dispatch Centre(“NLDC”). In order to continue the fixation of fees and charges of the RLDC and NLDC after expiry of earlier regulation on 31st March, 2014,

the Commission issued 2015 RLDC Regulations after reviewing the provisions of the earlier Regulations and keeping in view the developments in the Power system. The 2015 RLDC Regulations was made after following the procedure contemplated under section 178(3) of the Act and was notified in the Gazette of India on 6.8.2015.

The board areas covered under the 2015 RLDC Regulations are as under:-

- a) Provision for determining charges on the basis of the capital cost as per their CAPEX plan and ensuring reasonableness of capital cost has been provided. The annual charges shall consist of the following components, namely:-
 - (i) Return on equity;
 - (ii) Interest on loan capital;
 - (iii) Depreciation;
 - (iv) Operation and maintenance (excluding human resource) expenses;
 - (v) Human resource expenses;
 - (vi) LDC charges and corporate office expenses; and
 - (vii) Interest on working capital;
- b) Provision for segregating annual charges into annual system operation charges and annual market operation charges in the ration of 70:30 has been made and their recoveries has been specified from system users and market users;
- c) A base rate of return on equity of 15.5% has been provided which would be grossed up with the effective tax rate of the respective financial year;
- d) It has been made mandatory for the trading licensees and Power exchanges to register with the national Load Dispatch Centre by payment of the registration fees mandated in this Regulations;
- e) Provision was kept for LDC development fund to take care of the capital requirement of NLDC/RLDCs out of internal resources. Provision to maintain separate account for other income which shall not form part of LDC development has been provided and same will have to be utilized to meet contingency expenses for dynamic requirement of RLDC and NLDC;
- f) The Commission has specified key performance indicators to track the performance of the power system operator and also linked the incentive with the key performance indicators. Provision has been made to introduce certification linked fixed incentive to enhance the performance of system operator;

9. Central Electricity Regulatory Commission (Indian Electricity Grid Code) (Third Amendment) Regulations, 2015.

This amendment to IEGC is part of the Framework on Forecasting, Scheduling and Imbalance Handling for Variable Renewable Energy (RE) Sources. This Framework covers the solar and wind generators that are regional entities. The objective is to integrate large amounts of renewable energy on the national grid in a sustainable manner. Scheduling is an essential component of streamlined grid management. This amendment outlines how the Regional Load Dispatch Centres and the generators will interact so as to prepare schedule of RE sources based on forecasting. These schedules could be revised every 1.5 hours, up to 16 revisions in a day. This ensures higher accuracy of forecasting algorithms, thereby giving maximum visibility possible to the grid operators on how much RE power they can expect to be injected into the grid. This will greatly help in planning for balancing resources, thereby significantly reducing load-generation imbalance due to intermittent nature of RE sources. This also enables the generators to maximize any charges for deviation, as they are able to forecast better closer to the time-block.

10. Central Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) (Second Amendment) Regulations, 2015.

This amendment to DSM Regulations is part of the Framework on Forecasting, Scheduling and Imbalance Handling for Variable Renewable Energy (RE) Sources. This Framework covers the solar and wind generators that are regional entities. The objective of the amendment is to provide a commercial mechanism for RE generators to sell power across state boundaries. This would be feasible once they start scheduling the power with RLDCs. The proposed mechanism allows RE generators to participate in the inter-state market, wherein they are paid as per schedule and deviations are settled with the Regional DSM Pool. Taking cognizance of the intermittent nature of these sources, a tolerance band of 15% of available capacity has been allowed, within which there would be no revenue impact on the generator. Beyond this error band, a graded deviation charge would be applicable, thereby incentivizing the generator to improve accuracy of forecasting methods. In addition, the framework is designed such that possibility of gaming has been minimized.

11. Central Electricity Regulatory Commission (Ancillary Services Operations) Regulations, 2015

Objective of proposed Reserves Regulation Ancillary Services (RRAS) is to restore the frequency level at desired level and to relieve the congestion in the transmission network. Specifically, these regulations are the first step towards introducing Ancillary Services in the country that will enable the grid operator to ensure reliability and stability in the grid. The RRAS shall support both “Regulation Up” service (that provides capacity that can respond to signals or instruction of

the Nodal Agency for increase in generation) and “Regulation Down” service (that provides capacity that can respond to signals or instruction of the Nodal Agency for decrease in generation).

Regulation Up Service shall utilize “un-requisitioned surplus” of inter-state generating stations, whose tariff is determined or adopted by the Commission for their full capacity. Un-requisitioned surplus means the reserve capacity in a generating station that has not been requisitioned and is available for dispatch, and is computed as the difference between the declared capacity of the generation station and its total schedule under long-term, medium-term and short-term transactions, as per the relevant regulations of the Commission. On the other hand, Regulation Down service may be provided by any eligible generator. Incentives for both the generator(s) and their beneficiary(ies) have been built into the framework.

12. Central Electricity Regulatory Commission (Ancillary Services Operations) Regulations, 2015

Objective of proposed Reserves Regulation Ancillary Services (RRAS) is to restore the frequency level at desired level and to relieve the congestion in the transmission network. Specifically, these regulations are the first step towards introducing Ancillary Services in the country that will enable the grid operator to ensure reliability and stability in the grid. The RRAS shall support both “Regulation Up” service (that provides capacity that can respond to signals or instruction of the Nodal Agency for increase in generation) and “Regulation Down” service (that provides capacity that can respond to signals or instruction of the Nodal Agency for decrease in generation).

Regulation Up Service shall utilize “un-requisitioned surplus” of inter-state generating stations, whose tariff is determined or adopted by the Commission for their full capacity. Un-requisitioned surplus means the reserve capacity in a generating station that has not been requisitioned and is available for despatch, and is computed as the difference between the declared capacity of the generation station and its total schedule under long-term, medium-term and short-term transactions, as per the relevant regulations of the Commission. On the other hand, Regulation Down service may be provided by any eligible generator. Incentives for both the generator(s) and their beneficiary(ies) have been built into the framework.

13. CERC (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2012 – Third Amendment

CERC, on the recommendation of MNRE had notified the second amendment to RE Tariff Regulations on 05th January 2015 allowing use of fossil fuel for biomass projects up to 15% in terms of calorific value on annual basis. In the Statement of Reason to the second amendment, it was observed that while the normative Station Heat Rate was specified considering the usage of 100% biomass, the SHR would change if fossil fuel up to 15% in terms of calorific value on annual basis is used

Hence, in order to address this issue, the Commission has issued the Third Amendment to the CERC (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2012 amending Regulation 38 and 43 pertaining to Station Heat Rate and Calorific value respectively

In the current amendment, the SHR for biomass projects using travelling grate boilers is specified at 4126 kcal/kwh and SHR of 4063 kcal/kWh is specified for projects using AFBC boilers. Similarly, the calorific value for biomass projects using fossil fuel upto 15% of calorific contribution is specified at 3174 kcal/kg.

14. Central electricity Regulatory Commission (Terms and Conditions of Tariff) (First Amendment) Regulations, 2015

Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (2014 Tariff Regulations) was notified on 12.03.2014. As per the said regulations, the tariff of : (a) Generating companies owned and controlled by the Central Government; (b) Generating companies which have a composite scheme for generation and sale of electricity in more than one state; and (c) Inter-State transmission of electricity shall be determined during the period 2014-19.

In order to give effect to the “Scheme for utilisation of gas based power generation capacity” issued by the Government of India, the Commission proposed to amend the 2014 Tariff Regulations. In addition, necessity was felt to bring about clarity in certain respects to facilitate smooth implementation of the 2014 Tariff Regulations. Accordingly, Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (First Amendment) Regulations, 2015 was notified after following the due procedure as prescribed in section 178(3) of the Electricity Act, 2003 read with Electricity (Procedure for Previous Publication) Rules, 2005. The amendment broadly covers the following:-

- a) Recovery / refund of the difference between the interim tariff and final tariff by the generating companies and Inter-State transmission licensees.
- b) Sharing of financial gains on account of operational parameters.
- c) Gain/loss on account of foreign exchange rate variation included in the capital cost of generation or transmission projects.
- d) Separate provision made for determination of tariff of gas based generating stations which were covered under the “Scheme for utilization of gas based power generation capacity” issued by the Government of India.
- e) Depreciation rate prescribed for fiber optic.
- f) Clarity given for treatment of deferred tax liability in tariff.

15. Central electricity Regulatory Commission (Indoor/outdoor Medical Facilities) (First Amendment) Regulations, 2015

With the prior approval of the Central Government, CERC published Central Electricity Regulatory Commission (Indoor / Outdoor Medical Facilities) Regulations, 2005, hereinafter referred to as Principal Regulation, vide Gazette Notification on 18th November, 2005.

As per Regulation 1.3 of the Principal Regulations, these regulations apply to the employees of the Central Commission on regular appointment, deputation or short term contract. Further, Regulation 2.3 defines, employees as *'any person appointed by an on the rolls of the Central commission who is allowed to avail the benefits under these Regulations by the Central Commission'*. The Principal Regulations, therefore, do not permit the extension of medical facilities to employees of the Commission after their superannuation as they will no longer remain on the rolls of the Commission.

In order to attract personnel with adequate skills and knowledge and also to provide social security to its retired employees, it was felt that benefit of availing medical facilities may also be extended to employees who have been absorbed in the Commission and have served for a minimum of 5 years after absorption and have superannuated from the Commission.

Accordingly, with the prior approval of the Central Government, **Central Electricity Regulatory Commission (Indoor / Outdoor Medical Facilities) (First Amendment) Regulations, 2015** were Published vide Gazette Notification on 4th December, 2015. In the Amended Regulation, the definition of **Employee** mentioned in **Regulation 2.3** inter alia include the superannuated employees as under:

"Employee means any person appointed by and on the rolls of the Central Commission, who is allowed to avail the benefit under these regulations by the Central commission and also includes the employees who have superannuated from the Commission, having rendered service of not less than 5 years, after being permanently absorbed in the Commission"

Also, in order to keep a tab on th expenditure per retired officials and to monitor annual claim outgo, a ceiling on the OPD treatment of retired employees of CERC has been imposed by inserting Sub-Clause 5.2 after Sub-Clause 5.1 of the Regulation 5 of the Principal Regulations as under:

"5.2 In the case of superannuated employees of the Commission, the annual ceiling of the expenses incurred on outdoor treatment shall be as per CGHS Rules, or maximum of the pay scale plus grade pay of a serving employee holding equivalent post, whichever is lower,."

16. Central Electricity Regulatory Commission (Recruitment, Control and Service Conditions of Staff) Regulations, 2015

In exercise of power conferred by Section 178 read with Section 91 (3) of the Electricity Act, 2003, the Central Commission notified on 30.07.2007 the Central Electricity Regulatory Commission (Recruitment, Control and Service Conditions of Staff) Regulation, 2007 which are applicable to the staff of the Central Electricity Regulatory Commission.

The posts of Deputy Chief (Legal) and Assistant Chief (Legal) along with the scale of pay were sanctioned by the Central Government. The corresponding provisions regarding educational qualification, experience and qualifying service were required to be incorporated in Appendix-I of the said notification for recruitment of personnel through the specified mode. Accordingly, in exercise of the powers conferred under Section 91 (3) of the Electricity Act, 2003, the Central Commission with the approval of the Central Government has notified Central Electricity Regulatory Commission (Recruitment, Control and Service Conditions of Staff) Regulations, 2015 on 20.11.2015 by amending Appendix-I to the said notification dated 30.07.2007, providing for the educational qualification, experience and qualifying service for the posts of Deputy Chief (Legal) and Assistant Chief (Legal).

Joint Electricity Regulatory Commission for Goa & UTs Achievements Upto 31.12.2015

(Rs. in crore)

Sl. No	Scheme/ Programme/ Projects	Sanctioned cost/ Cumulative expenditure till 31.12.2015	Objective/ Outcome:	Outlay 2015-16			Quantifiable/ Deliverables/ Physical Outputs	Projected Outcome	Processes/ Timelines	Remarks/ Risk Factor	Achievements upto 31 st December, 2015
1	2	3		4(i) Non-Plan Budget (Amount Rs/ lacs)	4(ii) Plan Budget (Amount Rs/ lacs)	4(iii) Complementary Extra-Budgetary Resources	5	6	7	8	9
		3(i)	3 (ii)	6.33	NIL	NIL	The Commission would regulate tariff for supply of electricity in the state of Goa and UTs except Delhi.	This will be a permanent institution	The Joint Electricity Regulatory Commission is fully operational.		35 hearings were conducted at the Commission's head quarter and 6 public hearings in the areas under the jurisdiction of the Commission. The Commission conducted two meetings of State Advisory Committee. The Commission notified the following regulations in addition to amendments to its existing regulations: (a) JERC (Solar Power – Grid Connected Ground Mounted and Solar Rooftop Metering) Regulations 2015. (b) JERC (Standard of Performance for Distribution Licensee) Regulations 2015.

Bureau of Energy Efficiency Achievements Upto 31.12.2015

(Rs. in crore)

Sl. No.	Name of Scheme/ Programme	Objective/ Outcome	Outlay 2015-16	2015-16	Quantifiable Deliverables/ Physical Outputs	Achievements upto 31.12.2015	Remarks/ Risk Factor
1	2	3	BE 4 (i)	RE 4 (ii)	5	6	
BEE Schemes							
1	Standards, Codes & Labelling for Appliances, Buildings & Energy Efficiency Research Centre	<ul style="list-style-type: none"> - Enhance Credibility of the on-going S&L program - Achieve energy saving in line with national policy through end-use energy efficient products - Increase the visibility of the program among different stakeholders 	0.00	0.00	<ul style="list-style-type: none"> - New Product labeling: Inclusion of 2 new products under the S&L scheme. - Inclusion of three products in mandatory labeling program. - Continuation of awareness campaign. - Up gradation of Standard for 1 appliance. - Enhancement of check-testing activities by Independent agencies and SDAs. - Strengthening of test laboratories. 	<ul style="list-style-type: none"> - Moving from Voluntary to Mandatory program: 5 products were notified under mandatory program since January 2010. - Up gradation of standards for Window & Split Room Air Conditioner, Frost Free Refrigerators, electric water heater, color TV, Direct Cool Refrigerator and LPG stoves. - 16 products were launched in voluntary labeling program. Variable Capacity (Inverter AC) and LED lamps are recently launched. - Fuel efficiency Norms for passenger cars have been notified by Ministry of Power. - Draft regulation for making color TV, electric water heater and direct cool refrigerator as mandatory labeled appliance have been verified. 	The funding for the scheme has been shifted from GBS to Energy Conservation Fund maintained by BEE.

								<ul style="list-style-type: none"> - National Energy Awards Conservation Awards given to manufacturers of 8 product categories since 2009. - Statutory order for direct cool refrigerator, electric water heater and color TV have been approved by Ministry of Power and also vetted by Ministry of Law for final printing along with final regulation of these appliances. - Up gradation of Web Portal of S&L scheme is in progress. - Mobile App. Is launched for common consumers. - The Energy Conservation Building Code has so far been mandated in the following states and union territory: Rajasthan, Odisha, Punjab, Andhra Pradesh, Telangana, Karnataka, Uttarakhand and UT of Puducherry. - ECBC Cells have been set up in Uttar Pradesh, Karnataka and Chhattisgarh under the institutional framework for capacity building on ECBC implementation in States.
								<p>Implementation of ECBC in commercial buildings.</p> <p>Adoption of ECBC</p> <ul style="list-style-type: none"> - Amendment, & notification of ECBC in remaining states. - Modification in Schedule of Rates (SoR) & building bye-laws for states.
								3.30
								3.30
								To reduce energy consumption in commercial buildings.

	<ul style="list-style-type: none"> - Under the ECBC Master training programme a total of 89 ECBC Master Trainers have been certified so far. - Guidelines to implement energy efficiency upgrades in commercial buildings have been developed. - The National Building Code of India (NBC), a comprehensive building Code, is a national instrument providing guidelines for regulating the building construction activities across the country. NBC has now been amended to incorporate the ECBC through a new chapter named "Approach to Sustainability", thus giving ECBC a much broader coverage. - Green Rating Systems such as IGBC (Indian Green Building Council) and GRIHA (Green Rating for Integrated Habitat Assessment) have included the provisions of ECBC as a prerequisite for obtaining rating for the building energy performance. - 129 ESCOs have been empanelled by BEE through an open invitation and evaluation process.
<p><u>Administration & Enforcement of ECBC Implementation</u></p> <p>Establishment of ECBC Cells in states (MoUD & SDA's)</p> <ul style="list-style-type: none"> - Development of Test Standards & Programmes for lighting and HVAC components. - Support for creation of building material testing laboratories. - Create a cadre of ECBC expert professional. - Training programme for architects/engineers / design professionals/Code compliance officials. - Create a pool of M&V experts. - Development of ECBC professional examination and certification. - Development of Energy Efficient Guidelines for Multi storey Residential Buildings for Warm & Humid climatic zone. - Introduction of a voluntary star label for residential building 	

Facilitation of ECBC Demonstration projects

- Preparation of technical specifications in states.
- Establishment of feasibility studies.
- Creation of ECBC Cells in state PWDs

Energy efficiency in existing buildings

- Demonstrative projects in Existing Buildings.
- Continuation of existing ESCO accreditation process.
- EE Implementation in Public Buildings through ESCO route.
- Performance enhancement of commercial building based on Star Rating.
- Assistance to states for Energy Assessment and EE Implementation.
- Expansion and Up-gradation and Operation of existing Star Rating Scheme.

A w a r e n e s s campaign through Print and Electronic Media & Impact assessment

			<p>Contribution to State Energy Conservation Fund (SECF)</p>	<p>SECF is a statutory requirement and under EC Act. It is also one of the deliverables of SDAAs ECAP.</p>	<p>8.00</p>	<p>8.00</p>	<p>- Institutionalization of enforcement machinery at the state level programmes. - Manpower support to the SDAAs. - Workshops / training programs involving energy professionals. - Analysis and survey of the impact of energy conservation activities by the SDAAs. - Publicity/ awareness on energy efficiency in the states. - Maintenance and updation of internet platform and other database created. • Providing guidelines regarding timely utilization of financial support provided.</p>	<p>SECF has been established in 26 states of which 18 states have provided matching contribution.</p> <ul style="list-style-type: none"> • Coordinate with SDAAs to implement various energy conservation activities and utilization of fund under SECF. 	
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							<ul style="list-style-type: none"> Disbursement of Rs. 10.00 crores as contribution to SECF. Energy Audit Instrument Support for Energy Auditors. Theory cum Practices oriented training programmes for operators on energy efficiency in boilers, furnaces and power plants, Preparation of materials in English and its translation in local languages (including printing) on efficient use of fuels in furnaces and boilers. 	<ul style="list-style-type: none"> Module development for NCERT books in process. Reports for activities at State level are awaited. 	
			3.00	3.00	3.00	3.00	<p>HRD Programme</p> <p>Human Resource Development and capacity building for Energy Efficiency</p>		
3	Demand Side Management (DSM) (Agriculture, Municipal & SME)	Energy Efficiency and Technology Up-gradation in Small and Medium Enterprises (SME)				3.00	<p>Targeted energy consumption reduction of SMEs.</p>	<ul style="list-style-type: none"> Initiate the implementation of demonstration projects in the 5 Energy Intensive SME sectors. Conduct stakeholder workshops in sectors where technologies have been implemented. Initiate the PAN energy benchmarking study for energy intensive SME clusters. 	<ul style="list-style-type: none"> Inception workshops involving stakeholders from cluster associations, units, MSME, regional research and technical institutions and Local Service providers were conducted in five clusters. Baseline audits in selected units of Ludhiana, Varanasi and Indore cluster is completed. MoUs signed with units in Varanasi (Brick), Ludhiana (Forging) and Indore (Food) Clusters.

						<ul style="list-style-type: none"> - Energy saving process Technologies identified in Pali, Ludhiana and Indore. - Adoption of identified Energy Efficient technologies are being undertaken in Ludhiana and Varanasi cluster. 	
			0.00			<ul style="list-style-type: none"> - Initiate the activities to facilitate the state governments to implement the mandatory notification for new agriculture connections. - Facilitate DISCOMs to review the DPRs and implement pilot projects in 2 states. - Stakeholder consultation / workshops to be organized. - Consultation session with PHED to identify the pilot project and initiate preparation of feasibility report. 	
			5.00		<ul style="list-style-type: none"> - To reduce the overall power consumption, improving efficiencies of ground water extraction & reducing the subsidy burden of the states. 	<ul style="list-style-type: none"> - Five states i.e. Karnataka, Andhra Pradesh, Ultrakhand, Uttar Pradesh and Chhattisgarh submit their willingness to participate in AgDSM scheme. - For implementation of pilot energy efficiency projects in Public Health and Rural Drinking water pumping systems, ten states namely Gujarat, Jharkhand, Uttar Pradesh, Bihar, Kerala, Maharashtra, Himachal Pradesh, Chhattisgarh, Mizoram and Punjab submitted proposals. - Assignment for revalidation of two existing DPRs prepared at A.P and Rajasthan DISCOMs is completed. Implementation of pilot project is under consideration in A.P. 	
	Agriculture DSM						

	<ul style="list-style-type: none"> - Total 2209 inefficient pumpsets were replaced with star rated pumpsets under first AgDSM pilot project being implemented in Solapur, Maharashtra. First year sampled Monitoring & Verification report for 2209 pumpsets replaced was submitted and second year testing of pumpsets is being carried out at project site in Solapur, Maharashtra. - Contract between Ch a m u n d e s h w a r i Electricity Supply Co. Ltd (DISCOM), Karnataka and M/s EESL is signed for implementation of AgDSM DPR prepared in Mandya District of Kamataka. - 11 Detailed Project Reports (DPRs) have been prepared in 8 states for 11DISCOMs covering 20,750 pumpsets connected on 87 feeders. Average 40% (96 MU) energy saving potential assessed. - Workshops in 7 States for DISCOM officials and 26 open house sessions for farmers have been conducted under the program. 							
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				Capacity building of DISCOMS	- capacity building of the DISCOMS to implement DSM in their respective areas	13.47	13.47	<ul style="list-style-type: none"> - Establishment of DSM Cell by selected DISCOMs. - DISCOM-wise formulation of training module and organizing training for DISCOM's officials. - Providing consultant to each DISCOM for load survey and preparation of DSM action plan. 	<ul style="list-style-type: none"> - 30 DISCOMs have been selected based on the criteria developed by BEE. - MoU has been signed with 30 selected DISCOMs. - DSM cell has been established in 26 DISCOMs under this programme. - DSM regulation is notified in 11 States. 	
				Total		48.00	43.00			
				EAP Scheme						
1	BEE-GEF-WB MSME project	BEE-GEF-WB MSME project			<ul style="list-style-type: none"> - To increase demand for energy efficiency investment in MSMEs and to build their capacity to access commercial finance. 	2.00	2.00	<ul style="list-style-type: none"> • Development of Media Creative's awareness and outreach on energy efficiency • Development of web based Knowledge Portal and Help line • Demonstration of techno-economically feasible energy efficient technologies 	<ul style="list-style-type: none"> - Demonstration of Rotary Vacuum dryer in place of Hot air Trey Dryers in Chemical units at Ankleshwar has been successfully completed. - Marketing and Outreach Efforts. - Awareness and Capacity Building workshops are being organised in each cluster; - Technical Exhibition to facilitate the availability of energy efficient technologies; - Awareness and outreach through radio/newspapers / technical exhibitions/posters etc. - Knowledge Management & Sharing 	

The Major achievements of BEE

Standards & Labeling (S&L)

- Moving from Voluntary to Mandatory program: 5 products were notified under mandatory program since January 2010.
- Up gradation of standards for Window & Split Room Air Conditioner, Frost Free Refrigerators, electric water heater, color TV, Direct Cool Refrigerator and LPG stoves.
- 16 products were launched in voluntary labeling program. Variable Capacity (Inverter AC) and LED lamps are recently launched.
- Fuel efficiency Norms for passenger cars have been notified by Ministry of Power.
- Draft regulation for making color TV, electric water heater and direct cool refrigerator as mandatory labeled appliance have been verified.
- National Energy Conservation Awards given to manufacturers of 8 product categories since 2009.
- Statutory order for direct cool refrigerator, electric water heater and color TV have been approved by Ministry of Power and also vetted by Ministry of Law for final printing along with final regulation of these appliances.
- Up gradation of Web Portal of S&L scheme is in progress.

Energy Conservation Building Code

- The Energy Conservation Building Code has so far been mandated in the following states and union territory: Rajasthan, Odisha, Punjab, Andhra Pradesh, Telangana, Karnataka, Uttarakhand and UT of Puducherry.
- ECBC Cells have been set up in Uttar Pradesh, Karnataka and Chhattisgarh under the institutional framework for capacity building on ECBC implementation in States.
- Under the ECBC Master training programme a total of 89 ECBC Master Trainers have been certified so far.
- Guidelines to implement energy efficiency upgrades in commercial buildings have been developed.
- The National Building Code of India (NBC), a comprehensive building Code, is a national instrument providing guidelines for regulating the building construction

activities across the country. NBC has now been amended to incorporate the ECBC through a new chapter named “Approach to Sustainability”, thus giving ECBC a much broader coverage.

- Green Rating Systems such as IGBC (Indian Green Building Council) and GRIHA (Green Rating for Integrated Habitat Assessment) have included the provisions of ECBC as a prerequisite for obtaining rating for the building energy performance.
- 129 ESCOs have been empanelled by BEE through an open invitation and evaluation process.

State Designated Agencies (SDA)

- An amount of Rs.9.66 crores has been disbursed to 22 SDAs in FY 2015-16 till date for demonstration projects, workshops / training programme, publicity / awareness campaign, analysis of energy savings accrued etc

State Energy Conservation Fund (SECF)

- SECF has been established in 26 states of which 18 states have provided matching contribution.

Small and Medium Enterprises (SMEs)

- Inception workshops involving stakeholders from cluster associations, units, MSME, regional research and technical institutions and Local Service providers were conducted in five clusters.
- Baseline audits in selected units of Ludhiana, Varanasi and Indore cluster is completed.
- MoUs signed with units in Varanasi Brick, Ludhiana Forging and Indore Food Clusters
- Energy saving process Technologies identified in Pali , Ludhiana and Indore.
- Adoption of identified Energy Efficient technologies are being undertaken in Ludhiana and Varanasi cluster.

Agriculture DSM

- Five states i.e. Karnataka, Andhra Pradesh, Uttrakhand, Uttar Pradesh and Chhattisgarh submit their willingness to participate in AgDSM scheme.
- For implementation of pilot energy efficiency projects in Public Health and Rural Drinking water pumping systems, ten states namely Gujarat, Jharkhand, Uttar

Pradesh, Bihar, Kerala, Maharashtra, Himachal Pradesh, Chhattisgarh, Mizoram and Punjab submitted proposals.

- Assignment for revalidation of two existing DPRs prepared at A.P and Rajasthan DISCOMs is completed. Implementation of pilot project is under consideration in A.P.
- Total 2209 inefficient pumpsets were replaced with star rated pumpsets under first AgDSM pilot project being implemented in Solapur, Maharashtra. First year sampled Monitoring & Verification report for 2209 pumpsets replaced was submitted and second year testing of pumpsets is being carried out at project site in Solapur, Maharashtra.
- Contract between Chamundeshwari Electricity Supply Co. Ltd (DISCOM), Karnataka and M/s EESL is signed for implementation of AgDSM DPR prepared in Mandya District of Karnataka.
- 11 Detailed Project Reports (DPRs) have been prepared in 8 states for 11 DISCOMs covering 20,750 pumpsets connected on 87 feeders. Average 40% (96 MU) energy saving potential assessed.
- Workshops in 7 States for DISCOM officials and 26 open house sessions for farmers have been conducted under the program.
- Punjab & Haryana mandated the use of BEE star rated pumpsets for every new agricultural connection in the state. 40,000 pumps have been reported installed under the regulation in both states.
- Verified saving of 0.7 MW achieved during 11th plan. (as per NPC).

Municipal DSM

- One day interactive meeting cum workshops were held in 13 states for implementation of DPRs prepared in XI plan in one or two Urban Local Bodies (ULBs).
- State level steering committees are formed in 11 states to facilitate the implementation of DPRs.
- Four states have selected the ULBs for implementation of DPRs prepared during XI plan period.
- Letters were sent to 60 ULBs to select 20 water bodies for carrying out investment Grade Energy Audit

Capacity building of DISCOMS

- 30 DISCOMs have been selected based on the criteria developed by BEE.

- MoU has been signed with 30 selected DISCOMs.
- DSM cell has been established in 26 DISCOMs under this programme.
- DSM regulation is notified in 11 States.

BEE-GEF-World Bank MSME Project

- Demonstration of Rotary Vacuum dryer in place of Hot air Trey Dryers in Chemical units at Ankleshwar has been successfully completed.
- Marketing and Outreach Efforts
 - ❑ Awareness and Capacity Building workshops are being organised in each cluster;
 - ❑ Technical Exhibition to facilitate the availability of energy efficient technologies;
 - ❑ Awareness and outreach through radio/ newspapers / technical exhibitions/ posters etc.
- Knowledge Management & Sharing
 - ❑ Project e-newsletter for better outreach and information sharing;
 - ❑ Success stories based on the energy efficient measures undertaken in target clusters
- Development work for the Knowledge Portal has been completed and will be available in public domain by February end.
- Feasibility of Zig-Zag Technology Demonstration in Sri Ganganagar Brick kiln cluster in underway

Energy Conservation Achievements Upto 31.12.2015

(Rs. in crore)

Sl. No.	Name of Scheme/ Programme	Objective/ Outcome	Outlay		2015-16	Quantifiable Deliverables/ Physical Outputs	Achievements upto 31.12.2015	Remarks
			BE 4(i)	RE 4(ii)				
1	2 - <u>Energy Conservation Scheme</u> (i) National Energy Conservation Day/Awards	3 - To recognize the efforts of industrial and other establishment consumers to adopt energy conservation measures which may become models for others to emulate.	28.20	28.20	RE 4(ii)	5 - Creation of data base and its analysis EC Award participating units. - Compilation and dissemination of best-practices in industry and building sector. - Continuation of EC Awards on energy conservation. - Continuation of paintings competition on energy conservation. - Awareness campaign on energy conservation through print, electronic and other media for general public. - Development of materials on energy conservation for School/ITI/ Diploma Engg. College Curriculum. - Training of School teachers/ lecturers on the new modules/ curriculum. - Debates at Degree College level, ITI, Diploma Engineering College level & quiz competition at school level. - Establishment/ Strengthening of energy clubs in schools. - Developments of tip sheets/ brochures on Energy Conservation.	6 - The Energy Conservation Award function successfully held on 14 th December, 2015 at Vigyan Bhawan, which was inaugurated by Hon'ble Minister of State (Independent Charge) for Power, Coal and New and Renewable Energy. - This year 963 participating units collectively invested Rs.2384 crores in energy conservation measures & achieved a monetary savings of Rs.2928 crores every year. These units have avoided the installation of power generating capacity equivalent to 486 MW Thermal Power Station in comparison to 751 MW in 2014. - Painting competition on energy conservation 2015 at School, State & National Level was conducted successfully. The Competition is aimed at motivating the children towards energy conservation and offers them a chance to explore their creativity. - 105.25 lakhs students of 4 th to 9 th standards of the 36 States & UTs participated in nationwide competition held on energy conservation. - Awareness creation in general public. - Reports for activities at State level are awaited.	8
	(ii) School, and National Level Painting Competition for Children	- To inculcate in children the relevance of energy efficiency and conservation.						
	(iii) Awareness & Publicity	- To spread the message of energy conservation and efficiency through the media.						
	(iv) Student Capacity Building Programme	- Capacity Building of Students						

National Mission on Enhanced Energy Efficiency (NMEEE)	NMEEE is one of the 8 missions announced by PM as a part of National Action Plan on Climate Change. The provision is for operationalisation of the NMEEE	28.80	23.80	<p>Perform, Achieve and Trade (Industries)</p> <ul style="list-style-type: none"> • Filing of Energy Return in Form-1 from designated consumers (478 Nos.) reported (based on Form-1) • Energy Savings reported on Form-1) • Launch of website for maintaining records of ESCerts, which will be prepared & managed by Depository. • Publishing of operation manual on verification and check-verification for different stakeholders • Finalization of new target for PAT Cycle-2. • Finalization of concept note on Development of Energy Management System for 8 sectors • Finalization of trading rules • Notification of Targets for DCs for 2nd PAT cycle • Development of Trading platform for ESCerts <p>FEED (PRGF and VCFFEE) and EEPF (Energy Efficiency Financing Platform)</p> <ul style="list-style-type: none"> - Operationalization of PRGFEE programme - Operationalization of VCFFEE programme - To organize capacity building workshops for financial institutions and awareness workshops - To initiate business plan competition to promote energy efficiency business - To develop standard performance contract, M&V protocol, and risk assessment guidelines for energy efficiency projects 	<ul style="list-style-type: none"> - 6.686 million ton of oil equivalent energy saving Targets for 478 Designated Consumers (DC's) have been notified under the PAT scheme, which are to be achieved by 2014-15. - Sector Specific Form-1 (annual energy return form) along with Sector specific Draft Normalization Factors to streamline the monitoring and verification (M&V) process has been prepared. - Monitoring and verification protocols for all 8 sectors have been developed and have been published and put online. - Monitoring and Verification Reports form Designated consumers have been received for the assessment of the energy saved in PAT cycle 1. - Out of 478 DCs, the assessment of 350 DCs is complete in all respects. - Process of accreditation of Energy Auditors who will be engaged to execute the M&V process of DCs to assess their performances has been initiated and as of now around 200 accredited energy auditors are listed with BEE. - Deepening study has been also completed under which new DCs have been identified in the existing sectors. Around 300 – 350 new DCs have been identified. - The study of widening has also been completed under which three new sectors that are Railways, Refineries, DISCOMs have been notified to be included in the second cycle of PAT. - Several workshops conducted for the Designated Consumers for hand-holding them to fill up various forms required for data collection and evaluation.
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- Workshops and capacity building programs conducted for the Accredited Energy Auditors and SDAs.

- The 350 DCs whose M&V reports have been evaluated have achieved energy saving of 6.84 million tonnes of oil equivalent against the target of 4.84 million tonnes of oil equivalent.

- In PRGFEE a consortium of RECPDCL-REC-EESL has been appointed as Implementing Agency (IA) for operationalization of PRGFEE in July 2015. PRGFEE rules have been vetted by Ministry of Law and are in MoP for notification. IA has finalized the OM for operationalization of PRGFEE that will be approved subsequent to the notification of PRGFEE rules.

- Under VCFEE, MoP has constituted Board of Trustees for VCFEE. The VCFEE trust was registered on 7th July 2015. BEE has selected SIDBI as Fund Manager for VCFEE. VCFEE rules has been vetted by Ministry of Law and are in MoP for notification

- Under EEFPP, MoUs have already been signed by BEE with M/s. PTC India Ltd, M/s. SIDBI, Tata Capital and IFCI Ltd to promote financing for Energy Efficiency projects. BEE has signed MoU with Indian Banks' Association for training program on EE financing for SCBs. This training program was launched in June 2015. Two workshops for ToT were already organized in North and West zone in which approximately 30 trainers were trained. In Jan 2016 approx. 40 loan officers in Canara Bank were trained on EE financing.

- In NECA 2015, two new categories for FIs and best business models were introduced for encouraging financing in EE sector.

	Bachat Lamp Yojana (BLY)	- To promote energy efficient & high quality CFLs as replacement for incandescent bulbs in households.	1.00	1.00	<ul style="list-style-type: none"> - Maintain the structure of and Managing Entity (CME) - Provide technical assistance for monitoring and verification of individual projects - Continuous engagements with the State Electricity Distribution Companies - Workshops on Awareness of BLY - Inclusion of new projects under the registered PoA. (Depend upon the market scenario) - Continuous engagements with the State Electricity Distribution Companies - Facilitation to RGGVY team for implementation of LED projects - Formulating guidelines and processes for bulk procurement of LED bulbs for distribution of LED bulbs to the BPL households under RGGVY scheme - Monitoring and verification of savings achieved for the implementation of LED projects under RGGVY scheme 	<ul style="list-style-type: none"> - Based on the Monitoring & Verification report of BEE, 15,20,248 Certified Emission Reductions (CERs) issued by United Nations Framework Convention on Climate Change (UNFCCC) to BEE, which in turn transfers the CERs to the project implementers for trading with buyers on developed countries under BLY programme. 	
Super Efficient Equipment Programme (SEEP)	- To accelerate demand for super efficient appliances like ceiling fans/ Refrigerator/ agricultural pumps etc.		2.00	2.00	<ul style="list-style-type: none"> • Release of RIP for contracting fan manufacturers and measurement and verification agency • Empanelment of testing facilities for super efficient fans • Finalization of SEA Label and Media plan • Contracting qualified manufacturers • Hiring of MVA • Initiation of Media Campaign • Testing of prototypes • Type testing 	<ul style="list-style-type: none"> - Under SEEP, seven fan manufacturers have been selected for manufacturing and sale of super efficient fans. An independent Monitoring and Verification agency is also engaged. 	
Total			60.00	55.00			

National Energy Conservation Awards

- The Energy Conservation Award function successfully held on 14th December, 2015 at Vigyan Bhawan, which was inaugurated by Hon'ble Minister of State (Independent Charge) for Power, Coal and New and Renewable Energy.
- This year 963 participating units collectively invested Rs.2384 crores in energy conservation measures & achieved a monetary savings of Rs.2928 crores every year. These units have avoided the installation of power generating capacity equivalent to 486 MW Thermal Power Station in comparison to 751 MW in 2014.

Painting Competition on Energy Conservation for School Children

- Painting competition on energy conservation 2015 at School, State & National Level was conducted successfully. The Competition is aimed at motivating the children towards energy conservation and offers them a chance to explore their creativity.
- 105.25 lakhs students of 4th to 9th standards of the 36 States & UTs participated in nationwide competition held on energy conservation.

NMEEE

- 6.686 million ton of oil equivalent energy saving Targets for 478 Designated Consumers (DC's) have been notified under the PAT scheme, which are to be achieved by 2014-15.
- Sector Specific Form-1 (annual energy return form) along with Sector specific Draft Normalization Factors to streamline the monitoring and verification (M&V) process has been prepared.
- Monitoring and verification protocols for all 8 sectors have been developed and have been published and put online.
- Monitoring and Verification Reports form Designated consumers have been received for the assessment of the energy saved in PAT cycle 1.
- Out of 478 DCs, the assessment of 350 DCs is complete in all respects.
- Process of accreditation of Energy Auditors who will be engaged to execute the M&V process of DCs to assess their performances has been initiated and as of now around 200 accredited energy auditors are listed with BEE.
- Deepening study has been also completed under which new DCs have been identified in the existing sectors. Around 300 – 350 new DCs have been identified.

- The study of widening has also been completed under which three new sectors that are Railways, Refineries, DISCOMs have been notified to be included in the second cycle of PAT.
- Several workshops conducted for the Designated Consumers for hand-holding them to fill up various forms required for data collection and evaluation.
- Workshops and capacity building programs conducted for the Accredited Energy Auditors and SDAs.
- The 350 DCs whose M&V reports have been evaluated have achieved energy saving of 6.84 million tonnes of oil equivalent against the target of 4.84 million tonnes of oil equivalent.
- In PRGFEE a consortium of RECPDCL-REC-EESL has been appointed as Implementing Agency (IA) for operationalization of PRGFEE in July 2015. PRGFEE rules have been vetted by Ministry of Law and are in MoP for notification. IA has finalized the OM for operationalization of PRGFEE that will be approved subsequent to the notification of PRGFEE rules.
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- In NECA2015, two new categories for FIs and best business models were introduced for encouraging financing in EE sector.

BLY

- Based on the Monitoring & Verification report of BEE, 15,20,248 Certified Emission Reductions (CERs) issued by United Nations Framework Convention on Climate Change (UNFCCC) to BEE, which in turn transfers the CERs to the project implementers for trading with buyers on developed countries under BLY programme.

SEEP

- Under SEEP, seven fan manufacturers have been selected for manufacturing and sale of super efficient fans. An independent Monitoring and Verification agency is also engaged.

Damodar Valley Corporation Achievements Upto 31.12.2015

(Rs. in crore)

Sl. No.	Name of Project	Objective/ Outcome	Outlay BE 2015-16 (Rs. Cr.)	Expenditure upto 31.12.15 (Provisional)(*)	Quantifiable Deliverables / Milestones / Outcomes (Targets)	Processes / Timelines	Projected Outcome	Remark	Achievement w.r.t. Col (5)
1	2	3	4(i)	4(ii)	5	6	7	8	9
A.		A1] DVC's own Thermal Power Projects							
1		Chandrapura TPS Extn. Unit# 7 & 8 (2x 250 MW)	Capacity addition of 500 MW	25.32	0.00	To complete balance works in EPC & Non-EPC Work, Weir Work, Initial Spares, Service Tax Payments, SIP, Work under contingency etc. including contract closing.	03/2016	To complete balance work & contract closing.	Balance works under progress including contract closing activities initiated.
2		Mejia TPS Phase-II: Unit1&2 (2x 500 MW)	Capacity addition of 1000 MW	477.71	13.34	To complete balance works in EPC & Non-EPC like Rail Infrastructure, installation of Wagon Trippler, Township etc. & Contract closing.	03/2016	Part completion of balance work.	Completion of balance work under EPC package in progress. Civil work for doubling of captive railway line about 50% completed. Technical details finalized for installation of Wagon Tippler, Contract of Plant Water System package closed, contract closing of other packages has been initiated.

								03/2016	Part completion of balance activities of Non-EPC (Railway infra + Township)							Completion of Non EPC work under progress . Railway Infrastructure work completed and Township contract started.
5								04/2015	Possession of balance land in water corridor.	622.63	853.11	Capacity addition of 1200 MW	Raghunathpur TPS Ph-I: Unit# 1&2 (2x 600 MW)			Possession letter issued by Govt. of West Bengal on 28.08.2015. Physical possession obtained in end Oct'15 after demarcation.
								05/2015	Completion of water pipeline in possessed land.							Laying of pipeline completed in the possessed land except Managram By pass area (5.055acres)of water corridor in Oct'15.
								07/2015	Completion of laying of cross country water pipeline in balance land and completion of Transmission line.							Laying of pipeline completed in the possessed land of water corridor in mid Nov'15 and Transmission line erection completed in Dec'15.
								07/2015	Commission of Skid mounted pump							Skid mounted pump commissioned on 24.12.15.
								08/2015	COD of U#1							Trial run completed in April'15. Anticipated COD by March'16.

																			Unit synchronized on 09.01.16 followed by full load on 18.01.16. Trial run is continuing. Anticipated COD by March'16.
																			Ready for Ash disposal since Dec'15.
6																			Work under progress. Anticipated completion in totality by March'16.
																			Oil synchronization achieved on 31.03.15. targeted coal synchronization & full load in March'16 through manual bunkering.
																			Work under progress. Anticipated completion in June'16.
																			Work under progress. Anticipated completion in totality by March'16.
																			Now targeted in June '2016 with readiness of interconnecting route.
7																			Project aborted due to acute fund crunch.

F.	Pollution:	For Environmental compliance	1.50	0.00	Balance work of Dry Fly Ash Disposal System for B.TPS'B'	03/2016	Pollution norms compliance	Work under progress.
G.	Misc. Spill Over Works							
	[1] Mejia TPS U#1-4 & 5 - 6		2.00	0.00	For settlement of balance RA bills and contract closing	03/2016	Settlement of balance payment towards RA bills and contract closing.	Work under progress. Contract closing procedure is under progress.
H.	Refurbishment/ Extension/ Improvement	To improve performance of Generating units with improved infrastructural network	150.13					
I.	R&D Centre	To serve the requirement of DVC power stations and Transmission & Distribution system	1.00					
J.	SLDC scheme	Equity contribution to SLDC	0.80	0.00	Commissioning	03/2016	Speech and Data Communication.	Installation of all equipment completed. Tender for hiring of link for connectivity of main SLDC, Howrah to ERLDC has been opened on 08.02.16 and order will be awarded tentatively on 12.02.2016 for hiring of dark fibre. Work order for procurement of furniture for SLDC Howrah has been placed on M/s. Godrej on 22.01.16.

K.	Equity participation BPSCL		15.00										
L.	Equity participation NHPTL	Equity contribution to NHPTL	0.00										
M.	Equity participation: MAMC	Equity contribution to MAMC	2.00	0.71									
N.	Equity participation: DVTDPPL	Equity contribution to DVTDPPL	0.10										
O.	Captive Coal Mine : Khagra Joydev Proj.		0.00	108.88	Compliance of allotment agreement with GOI for Khagra-Joydev Coal Mine for obtaining coal from the Block	As & when advised by MoC, GOI	Retaining ownership of the Mine for coal security for MTPS (7 & 8)	****	DVC can engage MDO for coal production from the Miine				
	Grand Total in Rs. Cr. : A to O		4482.94	1280.87									

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Outcome Budget 2016-17