

ACTIVITIES REPORT OF ENERGY DEPARTMENT FOR THE YEAR 2014-15

The Department of Energy was created on 24th April 1990 consequent upon bifurcation of the then Irrigation & Power Department. Electricity is one of the prime inputs for both the economic development as well as overall well being of the people. Increase in power generation has cascading effect on all sectors leading to increased growth particularly in industry, agriculture and other ancillary trade and business activities. The objective of the Government is to become self sufficient in Power Generation. The State of Odisha has the distinction of being the pioneer in the country in implementing reforms in power sector.

The present generation capacity of the State is:-

(a)	Hydro Generation (OHPC)	-	2080 MW
(b)	Thermal Power Station	-	1530 MW
(c)	Central allocation.	-	1710 MW
(d)	Renewable Energy	-	<u>115 MW</u>
Total		-	5435 MW

At present the Department of Energy is functioning with 3 Heads of Department i.e :-

- (1) E.IC (Elect)-cum-PCEI, Odisha, Bhubaneswar
- (2) CEI(T&D), Odisha, Bhubaneswar
- (3) CE(P)-cum-CEI(G) , Odisha, Bhubaneswar

As well as four Public Sector Undertakings Viz. Odisha Hydro Power Corporation (OHPC), Odisha Power Generation Corporation (OPGC), Odisha Power Transmission Corporation (OPTCL) & GRIDCO Ltd.

The activities of the Department in respect of different public sector undertakings as well as Heads of Department are presented briefly as under:-

DEVELOPMENT OF SMALL HYDRO ELECTRIC PROJECTS (SHEPS) / MEDIUM HYDRO ELECTRICAL PROJECTS (MHEPS)

The development of Small/Mini /Micro Hydro Electric Project upto 25 MW is one of the important activities of this Department. Private Investors are encouraged to set up small hydro projects to enhance the generation capacity through renewable energy sources. In 2014-15 the State has received 245.18 MU of energy up to December, 2014.

28 nos of Memorandum of Understanding have been signed with the private developers with installed capacity about 295.5 MW and 30 nos. of fresh proposals have been received from private developers which are being examined. Besides, the Department is focusing on facilitating the implementation of MOUs by removing the bottlenecks in the execution of SHEPs.

REVENUE COLLECTION, INSPECTION & LICENSING ACTIVITIES

Electricity Duty (ED) constitutes an important source of the Government Revenue. Collection of Revenue from various electricity consumers comes in the form of ED, inspection fees, fees for testing equipment and fees for issuing electrical permit and licenses to both Wireman, Lineman, supervisor and contractor During the financial year 2013-14, this Department achieved the revenue collection to the tune of ₹ 670.11 Crore against a target of ₹710.00 Crore.

During the Financial Year 2014-15, an amount of ₹599.38 crore has been collected by 31.12.2014 as against the annual target of ₹800.00 Crore. Steps are being taken to achieve the target fixed for this year.

Regular monitoring is being done for recovery of Govt. dues (ED) locked up in Court Cases.

RURAL ELECTRIFICATION SCHEMES

(a) Biju Gram Jyoti (BGJ):

In order to ensure "Electricity to all" the State Government has launched a flagship scheme called Biju Gram Jyoti in the mid of 2007-08 for electrification of habitations having less than 100 population

and the BPL Household Electrification in those habitations which are not covered under RGGVY. There was a target to cover 10,000 habitations during the 11th Five Year Plan under the scheme against which 14104 nos. of habitations have been electrified. The State Government, till January, 2015 has provided ₹ 599.55 crore to the districts for implementation of the Scheme against which an expenditure of ₹397.48 crore has been made for the purpose as on 31.01.2015. Plan provision of ₹75.00 crore has been made in the Budget for the FY 2014-15.

(b) Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY):

This flagship programme of Govt. of India launched in April, 2005 to provide access to electricity to villages having population of 100 or more envisages 90% capital subsidy and 10% as loan component for the State. The scheme is executed through CPSUs viz NTPC, NHPC & PGCIL. Financial assistance to the tune of ₹3331.44 Crore has been released by Govt. of India as on 31.11.2014 through REC in favour of CPSUs. An amount of ₹3177.14 Crore has been utilized for electrification works by the CPSUs. There is a target to electrify 14856 un-electrified/ de-electrified villages, 29351 partially electrified villages and 3257471 BPL households in all 30 districts. Against this 14402 nos. of Un-Electrified villages have been electrified and in 26353 Nos. of Partially-Electrified villages, Intensified Electrification have been completed. Moreover, 2876149 nos. of BPL kits have also been installed and 2315605 nos. of BPL houses electrified. For the Financial Year 2014-15 a plan provision of ₹10.00 cr. has been made in the State budget for payment of loan component under the scheme.

DEVELOPMENT PROGRAMME FOR ELECTRICAL SYSTEM IMPROVEMENT (DESI)

State Government has launched a new initiative known as **‘Development Programme for Electrical System Improvement’ (DESI)** as a crucial supplement of Rural electrification schemes like BGJ and RGGVY aiming at dove-tailing funding support for replacement/additional transformer in place of burnt/overloaded

transformers and associated conductors and other system improvements from various development schemes like Integrated Action Plan (IAP), Backward Region Grant Fund (BRGF), Gopabandhu Grameen Yojana (GGY), Biju KBK Plan, Biju Kandhamal “O” Gajapati Yojana, Western Odisha Development Council (WODC) fund etc. The requirements for system improvements are estimated by DISCOMs and placed before District Electrical Committee (DEC) for approval and before Collector for sanction of funds under various schemes. Through this initiative, funding support of ₹200 cr. has been mobilized and 5280 Distribution Transformers have been installed till 31.01.2015 for system improvement. This initiative is expected to provide much relief in addressing the gaps in the RE Schemes & in the distribution network .

BIJU SAHARANCHALA VIDYUTIKARAN YOJANA(BSVY)

For providing access to electricity to the people living in un-electrified areas of urban local bodies, the State Government has launched a flagship programme namely, Biju Saharanchala Vidyutikarana Yojana (BSVY) during the year 2010-11. Under the scheme un-electrified habitations with minimum population of less than hundred along with BPL household electrification and system improvement will be taken up. Five (5) Municipal Corporations, 45 Municipalities and 61 NACs of the State have been covered under the Scheme. During the year 2010-11, ₹40.40 crore, during the year 2011-12, 2012-13 and 2013-14 ₹ 20.00 crore each have been provided to the districts @ of ₹1.00 crore per Municipal Corporation, ₹50.00 lakh per Municipality and ₹30.00 lakh per NAC. The maximum cost of electrification per habitations is ₹3.50 lakh and ₹2000/- for a BPL household connection. During Financial Year 2014-15, a budgetary provision of ₹10.00 crore has been made against which 2047 nos. of villages/ wards have been electrified till 31st January , 2015.

STANDARD TESTING LABORATORY

Standard Testing Laboratory functions as a third party Laboratory for testing and calibration of electrical equipments. All vital testing are being carried out in STL. A separate building is under construction for functioning of STL in Bhubaneswar with budgetary support of State Govt. For construction of STL Building, a budgetary provision of ₹1.50 crore was made for the year 2013-14. Out of that ₹1.02 Cr. has already been released to Chief Engineer Building, Odisha for this purpose. In the FY 2014-15 ₹83.00 lakh has been provided in the State Budget to support the scheme.

EQUITY SHARE INVESTMENT IN OPTCL.

State Government has decided to infuse additional equity of ₹ 300 Crore in a period of 5 years to support OPTCL in taking up transmission Projects in the financially unviable areas such as KBK, Western Odisha. During the FY 2011-12, ₹43.00 Crore was provided in the State Budget. During FY 2012-13, 2013-14 & 2014-15 funds to the tune of ₹50.00 crore each have been provided to OPTCL for this purpose.

CAPEX PROGRAMME FOR IMPROVEMENT OF DISTRIBUTION SYSTEM

CAPEX programme with an investment of ₹ 2400 Crore having an objective to improve Distribution system, quality of power to the consumers & to reduce AT & C loss under the programme has begun from the year 2011-12. State Govt. is to provide ₹1200 Crore (including 13th Finance Commission Grant) to DISCOMs as loan through GRIDCO with counterpart funding of ₹ 1200 Crore from DISCOMs. Till December 2014, ₹681 Crore was released to GRIDCO and budget provision of ₹135 Crore has been made during 2014-15 inclusive of 13th Finance Commission grant of ₹125 crore for the project. The 1st phase of CAPEX programme is in progress.

STRENGTHENING OF ELECTRIC SUPPLY IN KBK DISTRICT.

During the financial year 2012-13 ₹33 crore was allocated at supplementary stage for strengthening of electric supply in KBK districts under the RLTAAP . The projects have been identified and the works have begun. The Govt. has made a Plan Provision of ₹33.00 cr. during the F.Y 2013-14 & ₹20.00 cr. during the FY 2014-15 under the scheme and funds are being released for the purpose.

SHAMUKA BEACH PROJECT

In order to promote tourism in the State, the Government of Odisha have launched a mega project named Samuka Beach Project in Puri. Electrification component of the project has been entrusted to OPTCL and CESU. The tentative estimate of the electrification work is at ₹44.61 crore. State Government have made budgetary provision of Rs3.30 crore and Rs 5.00 crore during the financial year 2010-11 and 2011-12 respectively which has been provided to OPTCL and CESU for execution of the works. The project work is in progress. In order to continue the project ₹ 5.00 cr. was provided in the F.Y 2013-14 and ₹ 25.95 cr. in the FY 2014-15. Funds are being released to OPTCL for the purpose.

UNDERGROUND CABLING OF GRAND ROAD & TEMPLE AREA IN PURI AND IMPROVEMENT OF POWER SUPPLY TO KONARK AREA

During the year 2011-12, Govt. has decided for under ground cabling of Grand road and Temple Area, Puri to be implemented by CESU. Accordingly budget provision of Rs 9.00 Crore has been made during financial year 2011-12 out of which funds amounting to ₹ 8.17 Crore have been provided to CESU for this purpose. The work is in progress and scheduled to be completed soon. The underground cabling of Lingaraj Ratha Danda, Bhubaneswar and Samaleswari Temple area, Sambalpur with Budgetary support of ₹8.48 crore have also been taken up during 2013-14.

Similarly, for improvement of power supply system in Konark Area, budget provision of ₹8.00 crore was made during the FY 2011-12 and the entire funds was released to the executing agency i.e. OPTCL for execution of the work. In the FY 2014-15 ₹4.45 crore has

been made provision for other similar works under the scheme. The work is in progress.

ELECTRIFICATION OF IIT AT ARGUL, BHUBANESWAR

Department of Energy has been entrusted with the task of electrification of IIT, Argul, Bhubaneswar for which budget provisions of ₹8 crore each was provided during the financial years 2010-11 and 2011-12 and released in favour of OPTCL for execution of the work. Substantial progress has been made in the work and in order to complete the balance work, a plan provision of ₹5.00 cr. was made in the F.Y 2013-14 & in the FY 2014-15 a provision of ₹15.73 cr. has been made. Funds have been released in favour of OPTCL for the purpose.

ENERGY CONSERVATION

Energy conservation is Energy generation. To Co-ordinate, Regulate and enforce provisions of the Energy Conservation Act, 2001, EIC (Electricity) functions as State Designated Agency (SDA) for Odisha, and coordinates with Bureau of Energy Efficiency (BEE), Government of India, Government of Odisha, Private Organizations and other Stake-holders. Odisha Energy Conservation Building Code (ECBC) has been notified for adoption in the State and Odisha has become the first state to frame such code in the country.

Implementation of Energy efficiency in the 3327 lift irrigation (LI) system under the Pani Panchayat is being taken up with OLIC which will work towards grid load reduction as a demand side initiatives. Investment grade energy audit (IGEA) are in advance stage of implementation in four major drinking water pumping stations with the support of respective Public Health Divisions.

Implementation of high impact street light projects in selected ULBs of the State by undertaking retrofitting of existing inefficient street lights with LED with associated control systems to demonstrate and showcase benefits of energy efficiencies.

As part of the national awareness campaign, a state level function is being organized each year on **Energy Conservation Day**

i.e. on 14th Dec, at Bhubaneswar wherein District and State level quiz competitions are organized with the support of Centre for Environmental Studies (CES) and F&ENV Department to create awareness among the school students and general public.

During the FY 2013-14, a budget provision of ₹12.00 crore and during the FY 2014-15 a budget provision of ₹15.00 crore has been provided to carry out the energy conservation activities and awareness campaign in the State.

CONSTRUCTION OF OERC OFFICE BUILDING

For construction of Orissa Electricity Regulatory Commission (OERC) office building, State Govt. has agreed to provide financial support of ₹13 Crore out of which ₹3 Crore was provided during the FY 2012-13 and a provision of ₹5 Crore was made in the FY 2013-14 which was released for the purpose to OERC. The rest amount of ₹5 Crore has been provided in the current FY 2014-15. The construction work of the said building is over and the interior work is to be completed shortly.

SYSTEM STRENGTHENING FOR ELEPHANT CORRIDOR

In order to strengthen the Electrical Infrastructure along the Elephant Corridor and thereby to provide safety to the elephants and other wild animals, Govt. of Odisha has decided to take up a special scheme called System Strengthening for Elephant Corridor. A plan provision of ₹21.00 Crore was made during the Financial Year 2013-14 under the scheme and keeping in view its importance ₹35.85 Crore has been made provision in the FY 2014-15. Funds are being released for implementation of the project.

NABAKALEBAR

Keeping in view the future load of electricity on account of Nabakalebar of Lord Jagannath to be held in 2015, Government have decided to take special drive for up-gradation of electricity transmission system and other electrical infrastructures in Puri and its surroundings through OPTCL and CESU. For the purpose, plan proposal of ₹85.00 crore was made in the Financial Year 2013-14 and

an amount of ₹105.00 crore in the FY 2014-15. Funds are being released in favour of OPTCL for execution of the project.

SHIFTING OF TRANSFORMERS LOCATED IN SCHOOL, COLLEGE & ANGANWADI CENTRE

For shifting of electrical infrastructure located in School, College and Anganwadi Centre and important public institutions in the State on safety point of view, a plan provision of ₹20.00 crore in the Plan Budget 2013-14 and ₹20.38 crore in the FY 2014-15 have been made and funds are being released to the Executing Agencies for implementation.

DEDICATED AGRICULTURE & FISHERY FEEDER

In order to promote agriculture and pisci-culture, Government of Odisha has decided to provide Dedicated Electrical Feeders to Agriculture and Fishery sectors. The commissioning of dedicated feeders not only facilitate irrigation but also will provide growth support to the sector with development of ancillary activities like Cold storage, Food Processing Unit. Similarly for supply of reliable and quality electricity as required for maximizing fish and prawn production, their cleaning, grading, refrigeration and preservation, the need of separate Electrical Feeder is felt. Hence, Government in Energy Department has made a plan provision of ₹101.00 crore in the FY 2013-14 and ₹100.00 crore in FY 2014-15 for commissioning of dedicated Agriculture and Fishery Feeders. The clusters have been identified and the project implementation have begun through the nodal agency OPTCL.

GPS SURVEY OF INFRASTRUCTURE

In order to prepare a need based action plan for future projects, GPS survey of electrical infrastructure is also planned for which a budget provision of ₹1.00 crore was made during 2013-14 and a plan provision of ₹10.00 crore in the FY 2014-15. The work has been entrusted to OPTCL for implementation of the project.

CONSTRUCTION OF NEW 33/11 KV SUB-STATIONS

For quality supply of power to the consumers and to address the low voltage problem in rural area, Government of Odisha have planned to commission 550 nos. of new 33/11 KV Sub-Stations within a period of two years. Thus a budget provision of ₹179.00 crore was made during the Financial Year 2013-14 and a budget provision of ₹150.00 crore has been made in the FY 2014-15. The funds are being released in favour of OPTCL, the nodal agency for implementation of the project. The project work is in progress.

NEW SCHEME/ PROJECT & INITIATIVES

State Capital Region Improvement of Power System (SCRIPS)

Looking at tremendous infrastructural growth in all fronts across Bhubaneswar city and all nearby area during the recent days, there is immediate and immense need to expand as well as strengthen the existing power infrastructure in the region.

The Comprehensive Development Plan (CDP) for Bhubaneswar Cuttack Urban Complex has also made to think of the infrastructural expansion and renovation of energy sector. Taking these into consideration, the concept of State Capital Region Improvement of Power System (SCRIPS) is visualized with an objective of 24X7 uninterrupted stable power supplies to all classes of consumers including public services. To kick start the project, a provision of Rs.100.00 Crore is made for the F.Y 2014-15.

Odisha Power Sector Improvement Projects (OPSIP)

The recent super cyclone in Oct, 2013 which caused massive devastation to distribution and transmission network of Energy Sector in South part of Odisha experienced the deficiency of energy infrastructure in the State to combat the eventualities like Cyclone and Flood. There was a damage of energy infrastructure to the tune of Rs.1000.00 cr. The existing infrastructure is not capable of bearing threat of eventualities supra. Keeping in view, the State Govt. has evolved new schemes and projects for reliable and un-interrupted power supply to the consumers by adopting ultra-modern technology,

creating new and renovating the existing infrastructure, under the following programme/ schemes. Govt. have made the Budgetary support of Rs. 55.03 cr. in the Annual Budget 2014-15.

This being the umbrella scheme, having the definite objective to build up a robust energy infrastructure to combat the natural calamities with a number of projects/ sub-projects, the flexibilities in fund allocation under different projects and sub-projects are anticipated.

a. Radial to Ring Conversion Project

The Radial Ring Conversion Project is conceptualized in transmission and distribution sector to meet the current as well as anticipated demand of power in the State in coming years. In this system, one Substation can be fed from two sources of power which is capable of supplying power at the time of need from other sources. Thus the system will ensure uninterrupted power supply. Keeping in view the supply of quality and un-interrupted power to the consumers, Energy Department has proposed to launch a new project called Radial to Ring Conversion Project. For this purpose a provision of Rs.30.01 Crore is made for the F.Y 2014-15.

b. Disaster Response Centre

Since there is no Disaster Response Centre or Wing in power sector either in distribution or in transmission sector to combat the disaster and to restore the power supply with minimum time span, it became a herculean task to meet the requirement at the time of natural calamities. The last experience in Phailin and Flood, 2013 has made to think for a Response Centre which will be built up with minimum man power and technical capability to meet the challenge. Energy Department is launching this new project named as Disaster Response Centre for this purpose. A provision of Rs.5.00 Crore is made for the said scheme in F.Y 2014-15.

c. Disaster Resilient Power System

The massive devastation of transmission and distribution infrastructure of the energy sector in last Phailin and Flood, 2013 played the major role to think for a Disaster Resilient Power System in the State. So a new scheme is conceptualised for creation of energy infrastructure having capability to combat the natural calamities like Cyclone and Flood. A budget provision of Rs.20.01 Crore is kept for the F.Y 2014-15.

d. District Headquarter Projects

In order to make disaster resilient and to ensure un-interrupted power supply, it is decided to launch a project / scheme Disaster Resilient Power Infrastructure in all Districts Headquarters. For this purpose, a token provision of Rs.1.00 Lakh is kept for the F.Y 2014-15.

Smart Grid

For un-interrupted and reliable power supply to the consumers being the priority of the Govt. the need of adaption of new technology in transmission and distribution sector has become essential. In order to achieve the objective the adaption of Smart Grid concept in India has got its mandate. The Smart Grid is a progress from the present state of grid towards adding a set of smarter system or applications in a phased manner according to the priorities of each constituent utility. Indian Smart Grid Task Force (ISGTF), with close association with Indian Smart Grid Forum develop the norms from Smart Grid adaption which has been approved by MOP as the Smart Grid vision and road map for India. The Govt. of Odisha has taken initiatives for adaption of Smart Grid Technology in power sector (Transmission and Distribution Sector) with the budgetary support of Rs.15.00 cr. for the F.Y 2014-15, having the component namely v.i.z. GIS, SCADA, OPGW and AMI.

Infrastructure Assistance to GEDCOL

In order to promote Green Energy in the State, Govt. of Odisha has established Green Energy Development Corporation Ltd. (GEDCOL), a subsidiary of OHPC, which has started its operation from the F.Y. 2013-14. For launching different projects in its own domain, financial assistance is to be provided by the State Government. A budget provision of Rs.10.00 Crore is made for this scheme in the F.Y 2014-15.

Equity infusion to OHPC:

The State Government has decided to provide financial assistance through equity infusion to OHPC. For this purpose, a token budget provision of Rs.1.00 Lakh is made for the F.Y 2014-15.

**Odisha Power Sector Externally Aided Project (ADB Project)
(State Share)**

Taking into account the damages to infrastructure and supply of power, Government of Odisha in Energy Department has proposed for a special drive project for these worst affected towns of southern Odisha viz. Chatrapur, Gopalpur and Berhampur of Ganjam district. The plan involves a “build back better” approach by replacing damaged infrastructure with storm resilient alternatives, such as stronger towers, elevating substation equipment above flood levels and underground cabling in selected locations.

The project i.e. Odisha Power Sector Externally Aided Project (ADB Project) is being launched in the aforesaid affected area with the ADB loan assistance and budgetary support of Government of Odisha, for which a budget provision of Rs.250.00 crore has been made for the F.Y. 2014-15.

Odisha's Share for UMPP (Bedabahal)

In order to provide Odisha's Share towards additional land cost for UMPP (Bedabahal), in Sundargarh District, budget provision of Rs.47.50 has been made for the Financial Year 2014-15.

ODISHA HYDRO POWER CORPORATION LTD. (OHPC)

Odisha Hydro Power Corporation (OHPC) Ltd. was set up on 21st April 1995 consequent to the reform and restructuring of Power Sector in Odisha. Thereafter, all the Hydro Units of erstwhile OSEB & Govt. of Odisha were transferred to OHPC on 01.04.1996. At present, OHPC has following six ongoing Hydro Electric Projects and one Joint Hydro Electric Project having total installed capacity of 2063.50 MW which is a distinct improvement over its initial capacity of 1272 MW at the time of incorporation.

OHPC provides the cheapest power to the State Grid. The average tariff approved by OERC for the FY 2014-15 is 83.02 paise/kwh. The present power generation, Sale of Power, Design energy and design energy for sale are given below :

(i) **Power Generation**

Name of the Units	Installed Capacity (MW)	Design Energy (MU)	Design Energy for Sale (MU)	Generation for the FY 2014-15 (upto 30.11.2014) (MU)
Hirakud	275.5	684	677.16	453.64
Chiplima	72	490	485.10	199.89
Balimela	510	1183	1171.17	1018.96
Rengali	250	525	519.75	678.64
Upper Kolab	320	832	823.68	493.66
Upper Indravati	600	1962	1942.38	2102.16
Sub-Total	2027.50	5676	5619.24	4946.96
Machkund (Odisha Share 30%)entitled 50% drawl of Energy Generated	36.00	262.50	259.87	175.72
TOTAL	2063.50	5938.5	5879.11	5122.68
Planned Generation upto 30th Nov, 2014				5122.68

Important technical activities of OHPC & GEDCOL for the year 2014-15

GEDCOL (A 100% subsidiary of OHPC Ltd.):-

- i) Work order issued in favour of M/s WAPCOS Ltd for preparation of PFR for 18 nos. of SHEP. PFR for 09 nos. of SHEP has already been completed by WAPCOS Ltd.
- ii) GEDCOL participated in tendering process invited by SECI for JNNSM Phase – II Batch – I for implementation of a 20 MW Solar Power Plant at Manamunda . SECI has issued LOI for development of the projects on dtd. 26.02.2014. Work order has already been issued on M/s. BHEL on 09.10.2014 for EPC contract. Work is under process.
- iii) Financial Advisory Services Agreement (FASA) was signed with IFC for implementation of a total capacity of 5 MW roof top solar power plant on the roof top of Govt. buildings in Bhubaneswar & Cuttack. Request for Qualification (RFQ) has been floated for implementation of this 5 MW Roof Top Solar project in Bhubaneswar & Cuttack on dtd. 28.02.2014. Request for Proposal (RFP) and RFQ has been evaluated. The Project Implementation Agreement (PIA) and lease deed are under scrutiny.
- iv) DPR is under preparation for implementation of Kanupur 3 MW(2X1.5 MW) and Jambhira 2.4 MW(2X1.2MW) Dam Toe SHEP in Keonjhar and Mayurabhanja district respectively by M/S WAPCOS Ltd.

Odisha Hydro Power Corporation Ltd.:

- i) Work order placed in favour of WAPCOS for preparation of DPR for Pumped Storage Scheme at UIHEP, Mukhiguda on dt. 15.01.2014. M/s WAPCOS ha submitted the conceptual layout plan of the project.
- ii) Tender has been floated on 22.02.2014 for R&M of Unit 5 & 6 of HHEP,Burla. Pre-bid conference held on dt. 30.04.2014. The Techno commercial bid opened on 26.08.2014 and evaluation of the same is under progress.
- iii) Tender has been floated on 22.02.2014 for R & M of Unit – 3 of CHEP, Chiplima. Pre-bid conference held on dt.

- 28.04.2014. The Techno commercial bid opened on 05.08.2014 and evaluation of the same is under progress.
- iv) Tender has been floated on 22.02.2014 for R & M (with new TG) for unit – 1 to 6 of BHEP, Balimela. Pre-bid conference held on dt. 29.04.2014. The Techno commercial bid opened on 25.08.2014 and evaluation of the same is under progress.
 - v) OERC accorded in principle approval to carry out the R & M works of Unit#3 Chiplima , Unit #5 &6 HHEP,Burla and Units# 1 to 6 (Six units) of Balimela hydro electric projects under OHPC.
 - vi) Purchase order issued in favour of M/s BHEL for supply , Erection & commissioning of Digital Governor and new Stator in Unit# 1 of Upper Kolab. The materials for the above work have reached at the site. The work has been started from Dec'2014.
 - vii) Two sets of DVR and Governor for unit no. 1 &2 of UIHEP, Mukhiguda and its spares have already arrived at Chennai port from Japan and expected to be received at site shortly. Erection, testing & commissioning of these equipments will be taken up during the month of April and May 2015. Also purchase order has already been placed for supply of the required spares for the capital maintenance of Unit#3 of UIHEP.

ODISHA POWER GENERATION CORPORATION (OPGC)

OPGC a Govt. company is a Gold category state PSU. It has been incorporated in the year 1984 under the Companies Act 1956. It works to establish, operate and maintain electric power generating station, tie lines, sub-stations and transmission lines & connection therewith. It develops and deals in fuels i.e., coal, lignite, coke, coal-bed methane etc.

The present Installed Capacity of OPGCL is:

SI. No	Particulars	Capacity

1.	Thermal	420 MW
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FUNCTIONS & ACTIVITIES

Expansion of unit-1 & 2

OPGC has set up 2 thermal power plants with a capacity of 210 MW each in the IB Thermal Power Station, Banharpali in the District Jharsuguda (Odisha) at a cost of ₹1135Crore. The entire generation from the existing two units of 210 MW each, of Ib Thermal Power station is committed to GRIDCO Ltd on the basis of a long term PPA.

Expansion of unit-3 & 4

OPGC is pursuing expansion project comprising of (2x660 MW) power plants in the same location i.e., IB Thermal Power Station (ITPS) and development of captive coal mines in the District of Sundargarh at an estimated cost of Rs.11,547.00/- crores. The construction of power plants has been awarded in favour of BHEL & BGRE and the construction work is in progress. The power plant is scheduled for commercial operation towards the last part of FY 2017-18. Half of the power from the proposed units will be available to the state of Odisha through GRIDCO.

Generation for the last five years

Year	Units of power generated [in MU]	PLF %	Turnover ₹in Crore	Net Profit after Tax ₹in Crore
2009-10	2955.39	80.32	455.95	81.19
2010-11	3184.70	86.56	504.14	115.04
2011-12	2950.15	79.97	572.78	137.08
2012-13	3181.59	86.47	636.03	167.43
2013-14	2855.902	77.62	622.64	127.57
2014-15 (upto Aug, 2014)	1392.75	90.31	285.86	75.20

* Provisional figure

Performance Highlights-2013-14

OPGC's units 2x210 MW at Ib Thermal Power Station (ITPS) registered a PLF of 91.02% in the month of April to June 2014 which is the **highest among the state-run generating stations of the country as reported by CEA.**

ODISHA POWER TRANSMISSION CORPORATION LTD.(OPTCL)

Odisha Power Transmission Corporation Limited (OPTCL) ensures development of an effective and economical system of Intra-state and Inter-state transmission lines for smooth flow of electricity from generating station to load center. The infrastructure of OPTCL network is as follows:-

109 nos. of Grid Sub-Stations including Switching Station with transformation capacity of 13164.5 MVA and 12837Ckt.Kms.of Transmission lines of 400KV,220KV and132KV rating.The present peak demand of the state is around 3800MW, which is handled by the existing network and equipment of the system.

IMPORTANT ACTIVITIES OF OPTCL DURING THE YEAR 2014-15.

Important activities of O&M wing

Sl	Activity	Present Status
1	Up gradation of conductor in 132kV Chandaka-Ranasingpur feeder and Chandaka-Mancheswar D/C lines by HTLS conductor.	On going
2	Up gradation of 132kV Joda-Barbil line and Mendhasal-Khurda line	On gong
3	Conversion of S/C to D/C of 132kV Jajpur Road- Anandpur line	On going
4	Conversion of S/C to D/C of 132kV New Bolangir-Patnagarh line	On going
5	Conversion of S/C to D/C of 132kV New Bolangir- Sonapur line	On going

6	Addition of 132kV feeder bays at Balasore, Saintala & Khurda	On going
7	Addition of transformer bays at Bhadrak , Karanjia, Rairangpur, Budhipadar, Rajgangpur , Junagarh, Kalarangi, Kamakhya nagar & Duburi (old)	On going
8	Construction of LILO line from 220kV Katapali-Bolangir feeder up to Bolangir PG sub-station.	On going
9	Upgradation of Auto transformer capacity at Jayanagar Grid	On going
10	Replacement of old conductor with new in 132 KV Khurda-Puri, Berhampur-Digapahandi, Kendrapara-Paradeep-II, TTPS-Duburi-II, Jajpur Road-Bhadrak and 220kV Joda-TTPS-1, Meramundali-Bhanjanagar-1.	On going
11	Installation of Capacitor Banks at Boinda, Cuttack, Kendrapara, Jaleswar, Junagarh & Sonapur.	On going
12	Replacement of old & obsolete breakers, CT, PT, LA, isolators etc. and relays	On going
13	275MVA Transformation capacity addition in seven nos. of Grid substation.	Completed

1) Provision of SCADA interface point at all 220KV Grid Sub-station of OPTCL.

As per the amendment of OGC Regulation, 2006 dtd.29.8.2008, it has become mandatory to provide SCADA interface point to all 220 KV & above Grid Sub-stations of OPTCL. The investment proposal has been approved by Hon'ble OERC on dtd 02.11.2010 in case no 20/2010. The work is under progress through consultancy service of M/s PGCIL under expansion of existing ULDC system and expected to be completed by March, 2015.

2) Extension of ULDC SCADA system to all Grid Sub-stations of OPTCL. As per the amendment of OGC Regulations,2006 all grid s/s of OPTCL are required to be integrated under ULDC expansion scheme with SCADA connectivity to SLDC. Accordingly, 35 Grid Sub-stations have been identified for integration with OPTCL network under ULDC expansion scheme. The scheme has been approved by by BoD of OPTCL. The investment proposal has been approved by Hon'ble OERC on dtd 6.07.2010 in case no 124/2009. The work is presently at the final stage of completion through consultancy service of M/s PGCIL and

scheduled to be completed by the end of March,2015.

3) Reframing of Microwave network in OPTCL under ULDC scheme.

As per the directive of WPC Wing, Ministry of Communication Govt. of India, Microwave network in frequency band 2.3 GHz to 2.4 GHz are to be vacated for use of Broad Band operators. M/s PGCIL had taken up the job total for the eastern region for switching over from Microwave to optical fibre communication by laying of OPGW cable. The work is almost completed and will be handed over to OPTCL soon after SAT(Site Assessment Test).

4) Provision of PLCC & SCADA facility to 19 nos new Grid s/s under OPTCL.

PLCC & SCADA Equipment shall be provided at all 19 nos upcoming grid s/s under OPTCL as owner's supply item. LOA for DPLC(Digital Power Line Communication) has been placed on M/s Siemens . Delivery of materials has commenced for the 1st phase at an interval of 6 months in 3 phases as most of the S/s are under construction stage. LOA has been placed on M/s Alstom for supply of RTUs for the above grid s/s. Delivery of RTUs at site are under process.

5) Leasing of spare fibre to PGCIL

Spare optic fibre has been leased out to Powergrid between Jeypore-BBSR, TSTTP-Meramundali-Mendhasal-SLDC,Burla(new)-Budhipadar-Tarkera-Rourkela, Budhipadar-Tarkera and Burla(new)-Budhipadar OPGW link segment by which OPTCL is able to earn some revenue.

6) Provision of Optic fibre channel to IT wing of OPTCL

2 Mbps optic fibre channel has been provided to IT wing of OPTCL at Chandaka, Mendhasal, Narendrapur, Meramundali, Theruvali & Jayanagar for the smooth ERP operation in our existing OFC channel.

7) Extension of SCADA facility to DISCOMs

DISCOMs have been provided real time data through SLDC website by the Telecom wing to facilitate intra state ABT operation.

8) Maintenance of CUG scheme

All the executives of OPTCL have been provided with Closed User Group (CUG) mobile SIM cards under supervision of Telecom wing of OPTCL.

9) Laying of OPGW in 132KV lines of OPTCL.

Under the administrative approval of BoD, OPTCL, provision of OPGW connectivity has been extended to all 132KV lines for modernization of PLCC/SCADA system of OPTCL. Technical specifications, cost estimate etc. has been prepared and the tendering process are now under progress.

10) Provision of Tele-protection system in all 220KV & above lines through OPGW SDH equipment.

Under the administrative approval of CMD,OPTCL, the protection system of 220KV & above lines of OPTCL has been enlisted to be carried out through digital protection couplers for commissioning in OPGW SDH equipments. Technical specification, cost estimate etc, has been prepared and the tendering process are now under progress.

Important Activities of IT wing

1. Successful Production of "Energy Accounting and Settlement" System for OPTCL, SLDC & GRIDCO.

2. Wheeling Invoicing is already implemented for OPTCL. GRIDCO BSP invoicing shall be implemented for Jan 2015.

3. The following additional modules are implemented completely in OPTCL, SLDC & GRIDCO during the year. a. Projects
b. EAM

4. Geographical Information Systems (GIS) Pilot project covering EHT (O&M) Circle Cuttack is implemented. Rest of the EHT grid shall be covered in phase II.

5. Finance (Budget) Module is being presently implemented for OPTCL. The balance Modules viz., Loans and Investments of eShakti Project are scheduled to be rolled out by 2014-15 FY.

6. Management of end user IT infrastructure and operation of

GRIDCO and SLDC Primary Data Centres.

7. VSAT Network being established at 14 locations for TNF (Technically Non Feasible) Sites to conclude 102-Reach Point OGS-WAN.

8. Advanced Metering Infrastructure (AMI) Project implementation commenced. This will be completed in next financial year (2015-16).

9. Smart Grid committee constituted by Energy Department. IT, OPTCL Organised two meetings and is in the process of conducting Smart Grid Maturity Study for all power utilities in Odisha.

IPP Evacuation Twenty-nine(29) Nos. of Independent Power Producer(IPPs) have signed MOUs with Govt. of Odisha to set up power plants with a total generating capacity of 40620MW, out of which Odisha State share is 7259MW. Besides, there will be share of 4,860 MW from NTPC-Gajamara, NTPC-Darlipalli, NTPC — TTPS expansion and Odisha UMPP projects. In order to carry out the detail evacuation / absorption of state share of power from the upcoming generating stations, OPTCL has been working out a strategic Evacuation Plan agreeable to associated generating stations. The connectivity proposal of 29 nos. IPPs have been filed in OERC for kind approval. OPTCL has prepared connectivity proposal for 7 nos of fast track IPPs i.e. M/s Sterlite Energy Ltd., M/s GMR Kamalanga Energy Ltd., M/s JITPL, M/s Monnet Power Co. Ltd., M/s Lanco Babandh Power Ltd., M/s Ind Barath Energy (Utkal) Ltd., M/s Maa Durga Thermal Power Co. Ltd. to be connected in different existing / proposed S/s of OPTCL as per temporary / permanent connectivity plan.

ODISHA Power System Emergency Assistance Project(ADB Funded).

A disaster resilient Power system in transmission and distribution sectors has been planned for PHAILIN affected Berhampur, Chharatrapur and Gopalpur area. The Transmission project comprises interconnecting the existing Grid Substation Narendrapur, Berhampur, chhatrapur and a new 132/33 kV GIS

S/s at Autonagar with 132kV Underground cable with an estimated cost of Rs.236 Crores. The Distribution system comprises four nos of new 33/11 kV GIS Substations and up gradation of ten nos of existing substations with Underground cable, strengthening H-pole and also the 11/0.44 kV substations & LT network same way with an estimated cost of Rs.585 Crores. The total estimated cost of Rs.821 crore. The ADB will be funding US \$ 100 million for the project and the rest will be borne by the Govt. of Odisha. There are two packages i.e. package-1-"Transmission Component"& package-II-"Distribution Component". The tender has been floated for the above works.

Odisha Distribution System Strengthening Projects(ODSSP)

Construction of 33/11kV Substation:-

1) Govt. of Odisha have granted Rs.2600 Crores for construction of 520 Nos. of 33/11KV Substation in the State.

2) OPTCL is the Nodal Agency for construction of the above Substation.

3) Construction of 85nos of 33/11 KV Substation is under progress.

4) LOA to be issued for 88nos of 33/11 KV Substation in 4 nos of Packages in 2nd week of December,2014.

5) Evaluation of Phase-II R Tender is under Progress (total 163nos of 33/11KV shall be constructed in this tender).

6) The tender for Construction of 33/11KV 196nos of Substations under Phase-III has been floated during December, 2014.

Construction of 11kV Agriculture & Pisciculture feeders :-

1) Govt. of Odisha have granted Rs.1000 Crores for construction of dedicated 11KV Agriculture & Pisciculture feeders in Odisha.

2) OPTCL is the Nodal Agency for construction of the above lines and associated 11 KV Bays.

3) OPTCL have floated tender for construction of 45nos of 11kV dedicated fishery feeder on 12.11.2014 with an estimated cost

of Rs106Crore.

Reliability and Quality of power supply will be ensured with completion of the above said projects as per planning.

GRID CORPORATION OF ODISHA LTD (GRIDCO LTD)

Origin and Mandate of GRIDCO:

Pursuant to the implementation of Orissa Electricity Reform Act (OERA), 1995, GRIDCO was registered as a State owned Corporation of the Government of Odisha on 20th April, 1995 under the Companies Act, 1956 as the successor Organization to the erstwhile Orissa State Electricity Board (OSEB). Following implementation of the Electricity Act, 2003, the transmission activities was hived off from GRIDCO whereby GRIDCO presently carries out its bulk supply function as a Deemed Trading Utility. Being designated by the State Government as the State Designated Entity for procurement & sale of power in bulk to meet the State demand, GRIDCO procures the State share of power from inside and outside the State and supplies the same in bulk to the Electricity Distribution Companies (DISCOMs) for onward retail sale to the consumers of the State. Surplus Power, if any is traded to maximise the revenue.

Important activities carried out by GRIDCO during 2014-'15 (up to Sep, 2014):

1. Power Procurement:

During the FY 2014-15 (Apr.'14 to Sept.'14), source-wise power procured by GRIDCO is furnished in the table below:
(Provisional)

SI. No.	Source of power/ Generating Company	Energy Procured (MU)	Rate (Paise/Unit)	Cost of power (Rs. Crore)
1	OHPC (including Machhkund)	3988	71.84	286.50
2	OPGC	1341	205.77	275.94
3	TIPS	1670	259.22	432.90
4	Sesa Sterlite Ltd.	1477	190.58	281.49
5	GMR Kamalanga Energy Ltd	458	275.03	125.96
6	CGPs	200	275.00	55.00
7	New & Renewable	259	440.32	114.04

	Sources			
8	8 Co-Generation	140	275.00	38.50
9	Central Allocation	4101	339.65	1392.90
10	Trading through Power Exchanges	119	297.27	35.38
11	Purchase through NVVNL	33	339.86	11.22
Total		13786	221.23	3049.82

2. Power Scenario, Commissioning of IPPs& Capacity Addition:

Given below are the details of Installed Capacity / entitlement of availability of power by GRIDCO from various sources:

Sources of Power	Allocation(MW)
State hydro	2,080
OPGC	420
IPP (SESA, GMR, JITPL, NBVL)	1,110
New & Renewable sources	115
Sub-total (State)	3,725
Central allocation (hydro)	189
Central allocation (thermal) — including TIPS	1,521
Sub-total (Central Allocation)	1,710
Total	5,435

With regard to facilitating power generation within the State, GRIDCO has been encouraging IPPs for setting up of thermal power plants at different locations in the State.

M/s. Sesa Sterlite Energy Ltd. (SSL) and M/s. GMR Kamalanga Energy Ltd. (GKEL) have already started commercial operation of their thermal power plants of 2400 MW and 1050 MW capacities respectively. Odisha has shares of 600 MW and 262.5 MW respectively from the aforesaid power plants.

M/s. Jindal India Thermal Power Ltd. (JITPL) has commissioned their 1 Unit of 600 MW capacity on 29-03-2014 and the same is expected to be declared under commercial operation in the current FY 2014-15. Unit No. 2 of JITPL is likely to be commissioned during Dec, 2014. Odisha has a share of 12%, i.e., 144 MW from the aforesaid Units of JITPL.

GRIDCO has executed PPA with M/s. Nava Bharat Ventures Ltd. (NBVL) on 31-10-2014 for procurement of State share of power of 7.68 MW from their 64 MW Unit, which has been commissioned on 26-02-2013.

Further, the 1st Unit of the proposed 2x350 MW thermal power plant of M/s. Ind-Barath Energy (Utkal) Ltd. (IBEUL) is likely to be commissioned in Jan, 2015 and the 2nd Unit shall be commissioned in Apr, 2015. Odisha shall have a share of 12%, i.e., 84 MW from the aforesaid Units.

M/s. Monnet Power Company Ltd. (MPCL) shall commission their 2x525 MW thermal power plant, with Odisha share of 126 MW during FY 2015-'16.

660 MW, Unit No. 4 of Barh STPS, Stage-II of NTPC has been declared Commercial Operation on 15-11-2014. Odisha has a share of 83 MW from this power plant.

In view of comparatively high cost of power f NTPC stations and surplus power situation in the State, GRIDCO has requested for surrender of capacities allocated to the State from proposed stations of NTPC & its JV companies, including costly Barh STPS-I, Stage-II mentioned above, but, excluding share from the proposed 3x660 MW North Karanpura STPS.

3. Procurement of Power from New & Renewable Sources and meeting RPO:

At present GRIDCO has 115 MW to its credit from different New & Renewable sources of power, out of which 57 MW from Small Hydro Electric Projects, 38 MW from Solar PV Projects and 20 MW from Bio-mass Power Project.

It is expected that another 5MW of Thermal Solar Power through NVVNL, 30 MW Solar Power from Solar Energy Corporation of India (SECI), and 20 MW of Solar power from ACME India Ltd., and 15 MW of Biomass Energy from M/s. Octant Industries Ltd., are likely to be available during 2015.

During the 1st half of FY 2014-15 (April'14 to Sepember'14), GRIDCO has procured about 750 MU of energy from various renewable sources.

4. Trading of Power:

During the 1st half of FY 2014-15, GRIDCO has undertaken trading of surplus power of about 630 MU through Power Exchanges (IEX & PXIL) and bilateral arrangement through NVVNL & PTC

amounting to Rs. 300 Crore (Approx.). GRIDCO is hopeful to generate similar amount of revenue from such business during the 2nd half of FY 2014-'15.

5. Facilitating smooth Grid Management:

GRIDCO being one of the major entities drawing power from the Eastern Region Pool, follows grid stipulations strictly, especially with regard to schedule and drawl of power. GRIDCO's scheduling and drawal of power in the past has in fact helped in smooth and prudent management of the grid operation. This has helped in making the job of SLDC easy.

6. Protecting State's interest in PoC Regime:

Under the conventional postage stamp method of determination of Inter State Transmission Charge, GRIDCO was paying about Rs.10 Crore per month to PGCIL, the CTU. However, as per the dictum of new PoC methodology, which was expected to bring in substantial relief to GRIDCO due to incorporation of distance, direction and quantum of power flow concept into determination of Inter State Transmission Charge, in fact, resulted in outgo of about Rs. 26 Crore per month (more than two and half times) towards such Charges from GRIDCO.

Being aggrieved, GRIDCO, along with other affected beneficiary States (W.B., Jharkhand, Bihar etc.) in Eastern Region , has been vociferously raising their concerns in various legal forums arising out of additional burden of inter-state transmission charges due to the new PoC methodology. The matter is now sub-judice in the Hon'ble High Court of Delhi after remand of the matter by the Hon'ble Supreme Court of India.

7. Finance:

GRIDCO has made moderate profits of about Rs.32 Crore during FY 2012-'13. It is expected that financial position of GRIDCO would substantially improve during the coming years due to availability of surplus power for trading.

ODISHA THERMAL POWER CORPORATION LTD.(OTPC)

Pursuant to the decision of the State Govt of Odisha, the Odisha Thermal Power Corporation Limited (OTPC) was established on 29th Jan'2007, as a joint venture company of two State Public Sector Undertakings namely, the Odisha Mining Corporation Ltd (OMC) and The Odisha Hydro Power Corporation Ltd (OHPC) having equal share. OTPC is setting up a coal based super critical thermal power plant of 2400MW (3x800MW) capacity in Kamakhyanagar Tahasil of Dhenkanal district.

- The total land for the project including the railway corridor after deliberation & visit of CEA is finalized at 1767.908 acres.
- 60% of payment of compensation for private land out of `184 Crores has been made. Alienation of non-forest Govt land is under process by the Tahasildar-cum-Land Acquisition Officer, Kamakhyanagar.
- The cost of the project estimated at `16,174.17 Crores i.e. `6.74 Crores per MW. The levelised tariff for 25 years with discount factor 10% is estimated at `3.16 per kwh. An expenditure of `216 crores has been incurred on the project on the project till Jan'2015.
- Site specific studies like soil investigation, ground water survey, socio economic study, geological study, contour survey, area drainage study, hydrological study etc have been completed. DoWR has confirmed allocation of required water for the project. IDCO has started the initial work for construction of boundary wall, site office, transit house etc.
