

## **ACTIVITIES REPORT OF ENERGY DEPARTMENT FOR THE YEAR 2013-14**

The Department of Energy was created on 24<sup>th</sup> 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)	-	2085 MW
(b)	Thermal Power Station	-	1486 MW
(c)	Central allocation.	-	1184 MW
(d)	Renewable Energy	-	<u>90 MW</u>
	<b>Total</b>	<b>-</b>	<b>4845 MW</b>

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.

33 nos of Memorandum of Understanding have been signed with the private developers with installed capacity about 427 MW and 100 nos. of fresh proposals have been received from private developers which are being examined.

Department is focusing on facilitating the implementation of MOUs by removing the bottlenecks in the execution of SHEPs. Due to inadequate manpower in DOWR, design & drawing approval process was getting badly delayed. WAPCOS, a Govt. of India agency, has been entrusted for approval of design & drawings. The Terms of Reference (ToR) has already been finalized in a joint meeting between Energy Department, Water Resources Deptt, and WAPCOs. Besides WAPCOS, expression of interest (EoI) has been invited from NITs, IITs & CWC for empanelment to bring in competition and to reduce the cost & time involved in the process. State Technical Committee (STC) has cleared 2 nos. of Detailed Project Report (DPR) & 2 nos. Pre-feasibility Report (PFR) in this year. Govt. has recently constituted a steering committee under the Chairmanship of Chief Secretary to steer and monitor the progress of SHEPs for timely completion and to ensure formulation of a proper policy for 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 equipments and fees for issuing electrical permit and licenses to both Wireman, Lineman, supervisor and contractors. During the financial year 2012-13, this Department achieved the revenue collection to the tune of Rs. 591.16 Crore against a target of Rs.700.00 Crore.

During the Financial Year 2013-14, an amount of Rs.310.28 crore has been collected by 31.09.2013 as against the annual target of Rs.710.00 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 is a target to cover 10,000 habitations during the 11<sup>th</sup> Five Year Plan under the scheme against which 12437 nos. of habitations have been electrified so far and the works in 3402 habitations are in progress. The State Government has provided Rs. 552.96 crore under this schemes till Oct, 2013 to the districts for implementation of the Scheme against which expenditure of Rs. **302.22** crore has been made for the purpose as on 31.12.2013.

### **(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 Rs.3313.17 Crore has been released by Govt. of India as on 31.12.2013 through REC in favour of CPSUs. An amount of Rs.3040.66 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 house holds in all 30 districts. Against this 40305 nos. of villages have been completed, 2844318 nos. of BPL kits have been installed and 2035115 nos. of BPL houses have been electrified. For the Financial Year 2013-14 a plan provision of Rs.5.00 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 dovetailing 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 Rs.200 cr. is likely to be mobilized every year for system improvement. This initiative is expected to provide much relief in addressing the gaps in the RE Schemes & in the distribution network. During the current financial

year, till December-2013 Rs.149.93 crore has been released by different districts for this programme and 2263 Distribution Transformers have been replaced.

### **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. Three (3) Municipal Corporations, 37 Municipalities and 63 NACs of the State have been covered under the Scheme. During the year 2010-11, Rs.40.40 crore, during 2011-12 Rs, 20.00 Crore and 2012-13 Rs. 20.00 crore have been provided to the districts @ of Rs.1.00 crore per Municipal Corporation, Rs.50.00 lakh per Municipality and Rs.30.00 lakh per NAC. The maximum cost of electrification per habitations is Rs.3.50 lakh and Rs.2000/- for a BPL household connection. During Financial Year 2013-14, 1592 nos. of village/ wards have been electrified till Oct, 2013 with a budgetary provision of Rs.20.00 crore.

### **SELF HELP GROUP IN ENERGY FRANCHISE ARRANGEMENT (SEFA):-**

Government has launched a new initiative known as SEFA to entrust the responsibility of energy revenue collection and facilitating theft control and grievance redressal to the women SHGs with a view to enhancing the overall improvement of the distribution sector and reduction of AT & C Loss. The scheme is devised with attractive performance linked incentive package for the SHGs. This is implemented in association with the district administration & mission shakti. One women SHG is selected to perform the tasks of meter reading, billing, Revenue collection, facilitating new connection, arrear collection etc in a Grampanchayat. So far, SHGs are selected &

imparted training in all the 30 districts. Many groups have started functioning.

### **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 Rs.1.50 crore has been made for the year 2013-14. Out of that Rs.1.10 Cr. has already been released to Chief Engineer Building for this purpose.

### **EQUITY SHARE INVESTMENT IN OPTCL.**

State Government has decided to infuse additional equity of Rs. 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 year 2011-12, 2012-13 & 2013-14 funds to the tune of Rs. 43 Crore, Rs. 50 crore & Rs.50 Crore respectively has been provided to OPTCL for this purpose.

### **CAPEX PROGRAMME FOR IMPROVEMENT OF DISTRIBUTION SYSTEM**

CAPEX programme with an investment of Rs. 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 2010-11. State Govt. is to provide Rs.1200 Crore (including 13<sup>th</sup> Finance Commission Grant) to DISCOMs as loan through GRIDCO with counterpart funding of Rs. 1200 Crore from DISCOMs. During 2010-11, Rs.205 Crore was released to GRIDCO and budget provision of Rs.295 Crore was made during 2011-12 inclusive of 13<sup>th</sup> Finance Commission grant of Rs.125 crore for the project. Out of that Rs.135.00 Crore was released in favour of GRIDCO. Similarly, during the Financial Year 2012-13 a budgetary

provision of Rs.251.25 Crore was made. During the Financial Year 2013-14 a budgetary provision of Rs.135 crore has been made under the scheme. The 1<sup>st</sup> phase of CAPEX programme is in progress.

### **STRENGTHENING OF ELECTRIC SUPPLY IN KBK DISTRICT.**

During the current financial year 2012-13 Rs.33 crore was allocated at supplementary stage for strengthening of electric supply in KBK districts. The projects have been identified and the works have begun. The Govt. has further made a Plan Provision of Rs.33.00 cr. during the F.Y 2013-14 under the scheme and funds have been 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 Rs.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 Rs. 5.00 cr. has been made provision in the current F.Y 2013-14 and funds have been 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 Rs. 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 Rs.8.48 crore have also been taken up during 2013-14.

Similarly, for improvement of power supply system in Konark Area, budget provision of Rs.8.00 crore has been made during the financial year 2011-12 and the entire funds was released to the executing agency i.e. OPTCL for execution of the work. 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 Rs.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 Rs.5.00 cr. has been made in the F.Y 2013-14. 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. It is estimated that approximately 17 MW of grid load deduction can be achieved along with the operational benefit in reducing operational expenses of farmers. The Energy Conservation Measures are being implemented in four major Drinking Water Projects which will achieve saving of 9 million units with grid load reduction of 2 MW energy.

Besides, the urban local bodies LED street light projects are being taken up which will save 320,000 units of energy.

During 2013-14, budget provision of Rs 12.00 crore has been made 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 Rs.13 Crore out of which Rs.3 Crore was provided during the current Financial Year (2012-13) and as a 2nd spell, a plan provision of Rs.5 Crore was made in the Plan Estimate for the Year 2013-14 which has been released for the purpose to OERC. The construction work of the said building is in progress.

**SYSTEM STRENGTHENING FOR ELEPHANT CORRIDOR**

In order to strengthen the Electrical Infrastructure for Elephant Corridor area 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. The distribution companies of the State have already submitted their tentative estimate of Rs.27 Crore in 1st phase for the project. Keeping in view the importance of the scheme, a plan proposal of Rs.21.00 Crore is made during the Financial Year 2013-14 and accordingly funds have been 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 Rs.15.00 crore has been made in the Financial Year 2013-14 and has been 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 institution in the State on safety point of view, a plan proposal of Rs.20.00 crore is made in the Plan Budget 2013-14 and has been released to the Executing Agencies for implementation.

### **CONSTRUCTION OF SHAKTI BHAWAN**

For administrative convenience and to provide required space to different Organisations under administrative control of Energy Department there is a need for a common office building for which a plan proposal of Rs.3.00 crore is made during the Financial Year 2013-14 for construction of Shakti Bhawan and has been released in favour of OPTCL for execution of the work.

### **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 proposal of Rs.150.00 crore in Financial Year 2013-14 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 INFRACTURE**

In order to prepare a need based action plan for future projects, GPS survey of electrical infrastructure is also planned for which a budget proposal of Rs.1.00 crore is made during 2013-14. 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. In first spell, a budget proposal of Rs.200.00 crore is made during the Financial Year 2013-14. An amount of Rs. 50 crore is released in favour of OPTCL, the nodal agency for implementation of the project. The project work is in progress.

### **ODISHA HYDRO POWER CORPORATION LTD. (OHPC)**

Odisha Hydro Power Corporation (OHPC) Ltd. was set up on 21<sup>st</sup> 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 2062 MW which is a distinct improvement over its initial capacity of 1272 MW at the time of incorporation.

The Capacity augmentation is due to –

- (1) Operation of Upper Indravati Hydro Electric Project (600 MW), at Mukhiguda in 2001.
- (2) Renovation, Modernization & Up-rating of units – 1,2,3 & 4 of HHEP, Burla and thereby raising installed capacity by 40 MW.
- (3) Installation of two new units at BHEP, Balimela for 150 MW (2 x 75) in January 2009.

OHPC provides the cheapest power and contributing to the State Grid. 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 2013-14 (upto 22-12-2013) (MU)
Hirakud	275.5	684	677.16	625.07
Chiplima	72	490	485.10	266.61
Balimela	510	1183	1171.17	1456.89
Rengali	250	525	519.75	829.625
Upper Kolab	320	832	823.68	683.11
Upper Indravati	600	1962	1942.38	1938.09
<b>Sub-Total</b>	<b>2027.50</b>	<b>5676</b>	<b>5619.24</b>	<b>5799.41</b>
Machkund (Odisha Share 30%)entitled 50% drawl of Energy Generated	34.50	262.50	259.87	174.83
<b>TOTAL</b>	<b>2062</b>	<b>5938.5</b>	<b>5878.87</b>	<b>5974</b>
		<b>Planned Generation upto 31<sup>st</sup> March, 2013</b>		<b>7274</b>

**Activities to be undertaken in the year 2013-14****(Rupees in lakhs)**

a)	R/M of Unit-III of Chiplima	36.00
b)	Bhimkund, Baigundi & other project	155.00
c)	R/M of 6 (six) Units of BHEP, Balimela	84.00
d)	Office Building (Corporate Office)	35.00
e)	P.S.P.	92.00
f)	Renovation of RHEP	2500.00
	<b>TOTAL</b>	2902.00 (i.e. 29.02 Crore)

**Important activities undertaken in the year 2013-14.**

OHPC has completed and taken up various activities in the current financial year 2013- 14 which are given below:

- i) Renovation and Modernisation of Unit#2 Rengali Hydro Electric Project and Capital maintenance of Unit#3 Upper Kolab Power Project with major replacements and repair.
- ii) IDCO was requested to allot 300 Acres of land in Manmunda Industrial area in the district of Boudh to set up Solar Project

through Green Energy Development Corporation of Odisha Ltd. (GEDCOL), a fully subsidiary of OHPC, which was incorporated on 18.04.2013 to develop renewable energy potential available in the state.

- iii) DPR preparation process for 600 MW Pump Storage power plant at Upper Indravati hydro electric project, Kanupur (3 MW) and Jambhira (2.4 MW) dam two Small HEP is going on.
- iv) OHPC/GEDCOL is in the process of identifying 20 viable small hydro project sites for development of small hydro project of 100 MW.
- v) Work has been awarded to IFC for preparation of DPR through its subsidiary GEDCOL for installation of 5MW Roof Top Solar Plant in Government buildings in the twin city of Cuttack and Bhubaneswar. The roof top space for installation of Solar Power Plant has been identified.
- vi) Project Approval Committee of Govt. of Odisha has approved the proposal for complete replacement of old units (Unit #1,2,3,4,5,6) of Balimela HEP with an estimated cost of Rs.664.70 crore. Tender (ICB) has been floated 07.08.2013 for taking up the work.
- vii) Tender document is under preparation for complete replacement of Unit#5 & 6 of Hirakud Hydro Electric Project through retendering basing on the observation of OERC and floating of international competitive bidding (ICB) for taking up the work.

**ODISHA POWER GENERATION CORPORATION (OPGC)**

The present Installed Capacity of OPGCL is:

SI. No	Particulars	Capacity
1.	Thermal	420 MW

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 Rs.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.

**Generation for the last five years**

Year	Units of power generated [in MU]	PLF %	Turnover Rs.in Crs.	Net Profit after Tax Rs.in Crs.
2008-09	3187.33	86.63	464.87	111.37
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	167.44
2013-14 Up to June	752.058	81.99	123.75*	36.45

\* Does not include interest income

**Performance Highlights-2012-13**

OPGC's units 2x210 MW at Ib Thermal Power Station (ITPS) registered a PLF of 96.07% in the month of April and May 2012 which was the highest among the state-run generating stations of the

country and the second highest in the eastern region as reported by CEA.

OPGC units were the only thermal power unit in the state which continued to operate and providing uninterrupted power to the state even during the recent country wide grid failure in the month of August 2012.

**In the Year 2012-13 ITPS has registered the highest PLF among all the generating stations of the country operating under State PSUs**

**Expansion Plan: (UNIT 3&4)**

OPGC is implementing expansion plan of adding two more units with a combined capacity of 1320 MW during the 12th plan period with an estimated cost of about Rs.11547 crore. The expansion also includes the development of captive coal mine at Manoharpur. Financing agreement for the project has been entered with PFC and REC.

Generation corresponding to 50% of the total capacity has been tied up for sale to GRIDCO through a long term PPA already executed. Rest 50% is meant for direct sale through LTOA.

OPGC has already placed work order for construction of the plant with.

- BHEL for supply and erection of BTG at a cost of Rs.4051Crores and
- BGR Energy for supply and erection of BOP at a cost of Rs.1573.06 Crores

The units are targeted to be commissioned in the 12th plan period subject to the acquisition of land for ash pond, mines, MGR railway corridor, tapered linkage for coal and grant of necessary clearances for development of captive mines.



**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:-

107 nos. of Grid Sub-Stations including Switching Station with transformation capacity of 12,233 MVA and 11,461 Ckt. Kms. of Transmission lines of 400KV, 220KV and 132KV rating.

The present peak demand of the state is around 3800 MW, Which is handled by the existing network and equipment of the system. To improve the low voltage problem in 20nos. Grid Sub-Stations action has already been taken to install 275MVAR shunt capacitor with an estimated cost of Rs.12.71 Crores.

**ACHIEVEMENT DURING THE YEAR 2013-14:-****Capacity Augmentation executed during the year 2013-14.**

SI No	Name of the Grid S/s	Voltage Level (kV)	Type of Transformer	Capacity Addition (MVA)
	<b>Central Zone</b>			
1	Angul	132/33	Power	20
2	Boinda	132/33	Power	12.5
3	Chandaka	220/132	AUTO	60
4	Meramundali	220/132	AUTO	100
		132/33	Power	7.5
5	Rengali	220/33	Power	20
6	Cuttack	132/33	Power	40
7	Kamakshyanagar	132/33	Power	12.5
8	Kalarangi	132/33	Power	20
9	Mendhasal	220/33	Power(New)	20
10	Pattamundai	132/33	Power	7.5
	<b>North Zone</b>			
1	Anandapur	132/33	Power	7.5
2	Basta	132/33	Power	7.5
3	Bhadrak	220/132	AUTO	100
4	Duburi	220/33	Power	40
5	Jaleswar	132/33	Power	23
6	Joda	220/132	AUTO	100
7	Karanjia	132/33	Power	12.5
8	Rairangapur	132/33	Power	20
	<b>South Zone</b>			
1	Bhanjanagar	132/33	Power	40
2	Digapahandi	132/33	Power	12.5
3	Paralakhemundi	132/33	Power	20
4	Therubali	132/33	Power	20
5	Sunabedha	132/33	Power	7.5
	<b>West Zone</b>			
1	Barapali	132/33	Power	7.5
2	Brajarajnaragar	132/33	Power	20
3	Budhipadar	132/33	Power	12.5
4	Junagarh	132/33	Power	20
5	Katapali	220/132	AUTO	160
6	Rajgangpur	132/33	Power	40
7	Sundargarh	132/33	20	7.5

<b>NEW GRID S/S COMMISSIONED DURING 2013-14</b>		
<b>1</b>	132 kV LILO to 132/33 kV Grid S/s, Purushottampur(2.5km).	12-6-2013
<b>2</b>	1 x 20 MVA,132/33 kV Grid S/s at Kuchinda with LILO arrangement of existing Sambalpur-Rourkela 132kV line(29.358km).	4-7-2013
<b>3</b>	31x12.5MVA,132/33 kV Grid S/s at Purushottampur	11-8-2013
<b>4</b>	1X12.5MVA,132/33 kV Grid S/s at Chandpur	14-8-2013
<b>5</b>	M/s B.C.Mohanty Switching Station	25-9-2013
<b>6</b>	132kV line from M/s B.C.Mohanty Switching Station to TOMKA RTSS	2-10-2013
<b>7</b>	1 x 20 MVA ,220/33 kV Grid S/s at Laxmipur	6-10-2013

Sl. No.	<b>NEW GRID S/S TO BE COMMISSIONED DURING 2013 -14</b>
1	132/33 kV Grid S/s at Barbil
2	132/33 kV Grid S/s at Kalunga
3	220/132/33 kV Grid S/s at Lapanga
4	132/33 kV Grid S/s at Argul
5	132/33 kV Grid S/s at Sarasmal
6	132/33 kV Grid S/s at Kuchinda
	<b>SECOND TRANSFORMER TO BE COMMISSIONED DURING 2013 -14</b>
1	At 132/33 kV Grid S/s , Purushottampur
2	At 132/33 kV Grid S/s , Chandpur
3	At 400/220 kV Grid S/s , Duburi
4	At 220/33 kV Grid S/s , Laxmipur
	<b>TRANSMISSION LINE TO BE COMMISSIONED DURING 2013 -14</b>
1	132kV line from Jagatsingpur to Paradeep
2	132 kV LILO of 132 kV SC line from Meramundali-Arati Steel to Nuapatna S/s
3	400 kV DC line from Meramundali to Duburi
<b>4</b>	220 kV DC line from Paradeep to 10CL at Paradeep

OPTCL has also taken up the construction work of the Grid Sub-Stations at Barbil, Bonai, Kalunga, Gopinathpur, Kuanarmunda, Lapanga, Banki including transmission lines of Bidanasi — Cuttack, Paradeep-Jagatsingpur, Chandaka-Nimapara with its own funding.

OPTCL has already signed agreement with PGCIL and placed order for construction of Grid Sub-Stations at Dabugaon, Nuapada, Padmapur, Kuchinda & Boudh and 400KV transmission line from Meramundali to Duburi.

It has taken up the construction work of different Grid Sub-Stations at Kardagadia(Atri), Dhamara, Marshghai(Luna), Olaver along with associated line for which tendering work have been entrusted .

#### **IPP Evacuation & PPP Project**

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 7259MVV. 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. Keeping in view the commissioning program of the IPPs, OPTCL has prepared an evacuation plan taking into consideration of 7 Nos IPPs which are already commissioned (to be commissioned) by March-2014.

OPTCL Board has decided to execute some of the Transmission projects through Public Private Partnership(PPP) mode. Consultancy work is in progress for execution of 3Nos. 400KV S/s and associated 400KV transmission line to be executed in PPP mode.

## **Different Activities of Telecom Wing of OPTCL for the Year 2013-14**

### **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 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 M/s PGCIL and scheduled to be completed by March, 2014.

### **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, 30 Grid Sub-stations have been identified for integration with OPTCL network under ULDC expansion scheme. The scheme has been approved 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 under progress through M/s PGCIL and scheduled to be complete by the end of March,2014.

### **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 by Broad Band operators. M/s PGCIL had taken up the job for switching over from Microwave to optical fibre communication. Laying of OPGVV cable is already completed in the line segment covered under Microwave network.

**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 has been placed on M/s Siemens. Delivery of materials shall commence from Dec, 2013 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.

**5) Leasing of spare fibre to PGCIL**

One pair of spare optic fibre has been leased out to Powergrid between Jeypore-BBSR

OPGW link segment by which OPTCL is earning revenue Rs 28.39 lakhs per annum.

**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, Meramundal, Theruvali & Jayanagar for the smooth ERP operation in 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.

**Different activities of IT wing of OPTCL for the Year 2013-14 :-**

- Management of GRIDCO and SLDC Primary Data Centers.
- OGS-WAN established to cover-102 locations, Balance 2 locations shall be covered through VSAT technology.
- Managing production of "Energy Accounting" for OPTCL, SLDC & GRIDCO.
- Wheeling Invoicing is already automated. GRIDCO invoicing shall be automated for Nov-2013
- The following modules are implemented completely in OPTCL, SLDC & GRIDCO.

- i) HR core
- ii) Employee Self Service.
- iii) Performance Appraisal.
- iv) Pension Billing
- v) Payroll.
- vi) Procurement.
- vii) Inventory.
- viii) e-Tendering

Implementation of Asset Mapping in Geographical Information Systems (GIS) is planned on pilot basis during current financial year.

Modules covering Finance, O&M, Trust Funds and Document Management System are planned for complete roll out, presently.

**GRID CORPORATION OF ODISHA LTD (GRIDCO LTD)**

Power is one of the prime movers of economic development. The level of availability and accessibility of affordable and quality power is also one of the main determinants of the quality of life. Leading the country Odisha pioneered Power Sector Reform in the State during 1995. The Power Sector Reform also aims encouraging private players for investment in generation and distribution of power to increase un-interrupted clean power to the people.

GRIDCO Limited, the leading player assigned to act as State designated agency to procure power on behalf of State in case of IPPs, Private Developers and UMPPs. It is engaged in bulk purchase of power from generators through long term power purchase agreement and mandated to sale power in bulk to the DISCOMs.

The existing generation capacity which is available for Odisha is 4845 MW comprising State hydel 2085 MW, State thermal 1486 MW and Central allocation of 1184 MW.

GRIDCO has already executed power purchase agreement with 29 nos. of IPP, NTPC, OPGC for procuring additional 11,370 Mw power. It is expected that Odisha will turn into a surplus State by 2015-16.

GRIDCO has always endeavored to meet the energy demand of the State and has explored to tap all available sources including power banking, procurement through power exchanges in order to ensure un-interrupted power supply to the consumers of the State.

GRIDCO has been able to garner higher net surplus of about Rs. 735 Crore (Gross Margin being about Rs.997 Crore i.e. Rs.1000 Crore before interest & other expenses) during the 1st half (April'2013 to Septemehr'13) of FY 2013-14 as compared to the OERC estimation of about Rs.84 Crore. This is basically due to the additional revenue of about Rs.470 Crore obtained through power trading and savings in power purchase cost of about Rs.260 Crore due to better hydrology conditions which reduced the pooled cost of power purchase by a reduction of 43 P/U from the Commission's approved purchase rate of 229 P/U to an average of 196 P/U during FY 2013-14.

Even though GRIDCO's power purchase cost witnessed a decline of about Rs.260 Crore during April'13 to Sept.'13 as stated above, both its power purchase as well as sales to the DISCOMs has been more in comparison to the OERC pro-rated approval for the 1st half of FY 2013-14. In fact, GRIDCO purchased 13420 MU of energy



which is about 1400 MU more than OERC pro-rated approval quantum of 12029 MU and still saved about Rs.260 Crore in power purchase cost. Similarly, after meeting the excess drawal of about 360 MU by the four DISCOMs in the State, GRIDCO was able to trade 922 MU of energy that fetched about Rs.472 Crore in additional revenue.

The outgo due to interest and other expenses of Rs.261 Crore during the 1st six months (April'13 to September'13) could be contained at Rs.261 Crore which is almost at par with the OERC pro-rated approval of Rs.251 Crore. However, the payment of bulk supply bills and the outstanding dues (Rs.6435.49 Crore as on September, 2013) by the DISCOMs to GRIDCO has remained as an area of concern. In absence of DISCOMs clearing GRIDCO's dues, GRIDCO has been resorting to borrowings which has now scaled upto Rs.5163 Crore.

In comparison to the performance of the current year i.e. 2013-14, the performance during the last financial year 2012-13 has been moderate. During the last FY 2012-13, GRIDCO had notched up revenue income of Rs.5937 Crore through sale of 21902 MU to the DISCOMs (Regulated Business) and non-regulatory revenue of Rs.618 crore by sale of 1085 MU through power trading and UI. The Corporation ended up with a net profit of Rs.31.79 Crore during the FY 2012-13.

Present Capacity: The existing annual generation capacity in Odisha is 4845 MW as follows:

State Hydel	2085 MW
State Thermal	1486 MW
Renewable Energy	90 MW
Central Allocation	<u>1184 MW</u>

**Total: 4845 MW**

GRIDCO avails around 25325 MU power from these sources for meeting the State Demand. GRIDCO is the designated State Government Agency to procure power on behalf of State Government in case of all IPPs, Private Developers and UMPPs.

**Current Financial Position:**

The turnover, audited financial results of the Company for the last three years are as under:

<b>Financial Year</b>	<b>Turnover</b>	<b>Profit/(Loss)</b>	<b>Rs. in Crore</b>
			<b>Cumulative Loss</b>
2010-11 (Audited)	4363.94	(587.86)	(835.64)
2011-12 (Audited)	5336.79	(936.81)	(1772.45)
2012-13 (Provisional)	6766.27	31.79	(1740.66)

The OERC approves the Annual Revenue Requirement (ARR) and fixes the Bulk Supply Tariff every year for GRIDCO along with the other Utilities. While approving the tariff, the Commission doesn't allow recovery of the full cost as a result of which there is always a revenue deficit. The Commission assumes that, GRIDCO can make up the gap through UI / Trading. In reality, GRIDCO is unable to get adequate revenue due to deficit power scenario for which it has availed loans from Bank and Financial Institutions resulting in deterioration of its financials.

The brief financial position of GRIDCO as on 31.03.2013, is given below:

	<u>Rs. in Crores</u>
1 Total equity capital	576.71
2 Total loan as on 31.03.13	5165.36
3 Total sales 2012-13	6424.17
4 Total cost 2012-13	6618.09
5 Total interest & Financial charges (2012-13)	518.80
6 Total Profit for the current year (2012-13)	31.79
7 Total cumulative Loss as on 31.03.2013	1740.66

**Outstanding dues receivable from DISCOMs:**

The outstanding against the DISCOMs on account of various dues which stand at Rs.6435.92 Crore as on 30th September, 2013.

The details are as under:

a) BSP Dues	Rs. 3515.02 Crs.
b) Securitised dues as per OERC order dt.01.12.2008	Rs. 2380.41 Crs.
c) Rs.400 Crore, 12.50% Power Bond dues	Rs. 198.46 Crs.
d) Transfer scheme receivables	Rs. 167.60 Crs.
e) Deferred Credit (CESU)	Rs. 174.00 Crs.
<b>Total</b>	<b>Rs.6435.49 Crs.</b>

**CAPEX Programme of Government of Odisha:**

Besides, GRIDCO is the Nodal Agency to monitor the CAPEX program undertaken by Government of Odisha with proposed investment of Rs.2400 Crore in DISCOMs consisting of Rs.1200 Crore from the Government and Rs.1200 Crore counterpart funding from the DISCOMs over a period of four years for strengthening distribution infrastructure in the State of Odisha.

The Government of Odisha has released Rs.555.83 crore under the CAPEX programme for funding to the DISCOMs. GRIDCO in turn has released Rs. 210.74 Crore based on the requisition of funds by the DISCOMs. The programme is monitored by GRIDCO as the Nodal Agency.

**Capacity Addition in 12th, 13th & 14th Plan:**

GRIDCO has executed Power Purchase Agreements with 29 Nos. of IPPs, NTPC, OPGC,UMPP, and OTPCL etc. for State's entitlement of power of about 12000 MW- of power during 13th &14th plan period (FY 2017-18 to 2021-22 and FY 2022-23 to 2027-28). It is expected that during 12th plan, 6 nos. of fast track IPPs shall commission their units which will entitle the State to get about 1100 MW of power. Apart from this Odisha shall get about 840 MW from different projects of NTPC expected to be commissioned during 12th Plan making the State a surplus one during the 12th Plan itself. On successful Commissioning of Plants of NTPC, UMPP, OPGC & OTPCL etc., Odisha shall be surplus in power to the tune of about 4000 MW by the end of 13th Plan for trading outside the State subject to availability of remunerative prices and corridors.

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