



GOVERNMENT OF ORISSA

**ANNUAL ACTIVITIES REPORT
OF
ENERGY DEPARTMENT
FOR THE YEAR
2009-10**

ENERGY DEPARTMENT

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The Department of Energy was created on the 24th April 1990 consequent upon bifurcation of the then Irrigation & Power Department. Electricity is one of the prime needs for both the economic development as well as overall wellbeing 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 Orissa has the distinction of being the first State in the country for ushering in sweeping reforms in power sector. The objective of the power sector reforms is to provide consumers with reasonable, reliable and quality supply of power.

The demand for energy is met from the following sources :---

(a) Hydro Generation (O.H.P.C.)	... Generation capacity	2085 MW
(b) Thermal Power Station	... Generation capacity	880 MW
(c) Central allocation	...	<u>1059 MW</u>
	Total	4024MW

At present the Department of Energy is functioning with Heads of Department i.e. the E.I.C.(Elec.)-cum-P.C.E.I.(O), Bhubaneswar and public sector undertakings like Orissa Hydro Power Corporation, Orissa Power Generation Corporation, Orissa Power Transmission Corporation and GRIDCO.

The activities of the Department in respect of different Public Sector undertakings and the E.I.C.(Elec.)-cum-P.C.E.I.(O), Bhubaneswar is as under:---

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

The development of Small/Mini /Micro Hydro Electric Project up to 25 MW is one of the important activities of this Department. Private Investors are invited to the State to set up Small Hydro Projects which will enhance the generation capacity through renewable energy sources.

32 Nos. of Memorandum of Understanding have been signed with the private developers whose total Project installed capacity would be around 427 MW. So far three Small Hydro Electric Projects, namely Middle Kolab and Lower Kolab (25 MW & 12 MW) & Samal Barrage, Angul have been commissioned.

ENERGY CONSERVATION

The E.I.C.(Elec.)-cum-P.C.E.I.(O), Bhubaneswar the State Designated Agency (SDA) to co-ordinate regulate and enforce provisions of the Energy Conservation Act, 2001 within the State. The important achievements include:

1. During 2009-10 Energy Audit in 20 Govt. Buildings have been taken up including Capital Hospital, Secretariat, Raj Bhawan, Suchana Bhawan, OLA etc. Energy Audit incase of Orissa High Court has been completed.
2. State Level Workshop of designated consumers have been organized along with training programme of certified Energy Managers & Energy Auditors.
3. The Internet Platform for E-filing of Energy Data and communication of SDA is established with support from National Informatic Center (N.I.C.)
4. Draft Report of Demonstration Project for re-vamping of water pumping stations of Palasuni and Bhuasuni Water works is finalized.
5. A State Level Essay writing competition is organized among the School level participants for creating mass Awareness. Similarly short documentary videos are produced with support of ORSAC as a part of Awareness Campaign.
6. LED village campaign is launched to promote energy conservation.

ORISSA HYDRO POWER CORPORATION LTD. (OHPC)

Orissa Hydro Power Corporation (OHPC) Ltd. was set up on the 21st April 1995 consequent to the reform and restructuring of Power Sector in Orissa. Thereafter, all the Hydro Unit of erstwhile OSEB & Govt. of Orissa were transferred to OHPC on 01.04.1996. At present, OHPC has following six ongoing Hydro Electric Projects and one Joint Hydro Electric Project with an 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 of Units – 1,2,3 & 4 of Hydro Power Station at Burla in 1988 and 2006 of 40 MW (12 x 2 + 8 x 2).
- (3) Installation of two Units of Balimela Hydro Electric Projects of 150 MW (2 x 75) in January,2009.

(b) R & M of Unit - III of Chiplima Power House

As per the recommendation of National Committee constituted in 1989 by Govt. of India consisting of representatives of CEA, BHEL, PFC & Project authorities, R & M, works of units were envisaged. After prolonged deliberation and taking into account site conditions, OHPC decided to go for R & M instead of complete replacement of Generating unit, and invited Expression of Interest (EoI) for engagement of consultant for R & M of Unit-III from concept to commissioning. Finalisation of detailed scope of work & project report on the basis of RLA study is under progress by OHPC.

(c) R & M of Unit – 1 of Rengali (50 MW)

DPR for the above work was prepared & then placed before OHPC Board on the 10th July 2009 for approval. Board has already accorded in-principle approval on the proposal. OERC too has accepted the proposal and allowed OHPC to undertake the R & M works of Unit –1 of RHEP, Rengali. Mean while, DAVR & Governor have been procured from BHEL, the OEM and order has already been placed on M/s BHEL for supply, erection & commissioning of stator, rotor, runner assembly and dismantling & retrofitting works. The work of Unit-1 by BHEL is expected to be completed in May, 2012.

These projects are still under review by the Inter Departmental Co-ordination Committee for their implementation.

(ii) Orissa Thermal Power Corporation Ltd.

OHPC & Orissa Mining Corporation Ltd. have together floated a Joint Venture Company namely Orissa Thermal Power Corporation Ltd. for setting up thermal power plant of 2000 MW capacity. OHPC is a 50% shareholder of this JV Company. The process of land acquisition, Coal linkage, Water allocation is under progress. A committee comprising Sr. Executives from DOWR, OTPCL, OHPC and Dam Safety Deptt. have been constituted for expediting the various clearances.

(iii) Development of Baitarani West Coal Block (602 MT)

Baitarani West Coal Block of 602 MT has been allotted equally among OHPC, the Kerala State Electricity Board and Gujarat Power Corporation Ltd. through the Govt. Dispensation Route vide the Govt. Ministry of Coal letter dated the 25th July 2007. For this purpose development of Coal block, engagement of consultant for selection of Mines Development Operators (MDO) issue of Work Order, finalization of forest clearance as well as land acquisition is under progress.

ORISSA POWER GENERATION CORPORATION (OPGC)

OPGC has been constantly striving for improving its performance by achieving better Plant Load Factor (PLF) with due stress on safety, health and environment. It has focused its attention on improvement of performance through adoption of various measures including maintenance of plant, machineries and renovation and modernization.

The present peak demand of the State is around 3000 MW, which is handled by the existing network and equipment of the system. To improve the low voltage problem in 23 Nos. Grid substation, action has already been initiated to install 275 MVAR shunt capacitor with an estimated cost of Rs. 1763.327 lakhs.

OPTCL has taken up the construction work of the Grid substations at Barbil, Bonai and Anandpur including transmission line of Bidanasi-Cuttack, Paradip-Jagatsinghpur, Mendhasal-Bidanasi and Ib-Meramundali with its own funding.

OPTCL has already signed an agreement with PGCIL and placed order for construction of Grid substations at Dabugaon, Bhawanipatna, Nuapada, Padmapur, Kuchinda and Boudh and 400 kV transmission line from Meramundali to Duburi within 32-36 months time.

OPTCL has taken up the construction work of different Grid substations at Purushottampur, Chandpur, Banki, Karadagadia, Kalunga, Udala, Keonjhar, Lapanga, Kuarmunda, Samuka beach resort, Puri and Arugul (11 Nos.) for which tendering works have been entrusted to NTPC.

The Commissioning work of 220 kV Grid substations at Balangir, Paradip and 132/33 kV Grid substations at Barapalli, Karanjia, Phulnakhara, Badagada and Basta have been made operational recently.

OPTCL has prepared the integrated transmission planning for the 11th plan period taking the system peak demand of 4459 MW. As per planning, 5 Nos. of 400 kV Grid substation, 15 Nos. of 220 kV Grid substation and 31 Nos. of 132 kV Grid substations including connecting transmission lines are proposed to be constructed. In addition to above, the proposal for construction of 1 no. of 220 kV Grid substation and 2 Nos. 132 kV transmission lines have been made to meet the peak demand of 6363 MW in 12th plan period. Further a proposal for installation of shunt capacitor bank of capacity 760 MVAR and 450 MVAR in 11th and 12th plan period respectively has been taken up.

Besides the same the proposal for augmentation of 50 Nos. existing grid substation with 3rd transformer are also included in said planning (11th plan period).

This is possible since GRIDCO has been able to earn substantial revenue of Rs. 3803.02 crore through trading of surplus power. The revenue earned from trading and UI charges has been utilized in the Sector which has helped in maintaining Retail Supply Tariff (RST) without any hike for the last 9 (nine) years although the Power Purchase Cost has gone up substantially.

Besides, GRIDCO has been able to reduce its loan liability which was Rs. 3240.83 crore as on 01-04-2005 to Rs. 1829.98 crore as on 31-03-2009 although the Regulatory Authority has not allowed the repayment of the entire loan liability.

GRIDCO is the designated State Govt. Agency to procure power on behalf of Govt. in case of all IPPs, Private Developers and UMPPs. As per the State policy, they have to deliver a part of their generated energy in the State. GRIDCO is constantly making its all out efforts to meet the burgeoning power demand inside the State.

While determining the Bulk Supply Price (BSP) for the financial year 2009-10 as Hon'ble Commission has left a revenue gap of Rs.915.48 crore (including loan repayment of Rs.277.79 crore). However, the estimated revenue gap during financial year 2009-10 is around Rs.1654.00 crore (approximately) which is mainly due to procurement of high cost power to meet the demand of the State. As per the order, the gap is to be met partly from the earning of trading of power as well as through UI mechanism. The balance uncovered amount, if any, should be met by availing loan from Financial Institutions/ Banks and Government subvention.

The hydrology conditions during financial year 2009-10 not being favourable, GRIDCO is not able to generate revenue from trading to meet the revenue gap left by OERC in their tariff order. Due to rapid industrialization, rural electrification,