

# ORISSA ELECTRICITY REGULATORY COMMISSION

BIDYUT NIYAMAK BHAWAN  
UNIT-VIII, BHUBANESWAR - 751 012  
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Present : Shri B. K. Das, Chairperson  
Shri K.C. Badu, Member  
Shri B.K. Misra, Member

## **Case No.86/2009**

M/s OPTCL

.... **Petitioner**

**In the matter of: investment proposal of OPTCL for construction of 132/33KV,  
220/33KV & 220/ 132 KV S/s.**

For the petitioner :

Mr. D. K. Chowdhury, Sr. GM(TP&Cont)  
Mr. L.R. Dash, AGM (TP&Cont), OPTCL .

**Date of Hearing : 11.08.2009**

**Date of Order : 15.09.2009**

## **ORDER**

Mr. Chowdhury, stated that OPTCL had filed an application for seeking approval of investment of Rs. 129.79 crore for construction of Substation and associated line at Udala, Keonjar & Lapanga on dtd. 26.06.2009 as per License Conditions 10 read with condition 23.1 of OPTCL , as the approval of the Commission was required for investment cost beyond Rs.10 crores. The details of proposal for investment of Rs.129.79 crores are as follows :-

- a). Construction of new 2X12.5 MVA, 132/33 kV substation at Udala along with associated transmission line of 39.728 kms., with estimated cost Rs.29.92crore and funding from own resources and suitable financial institutions.
- b). Construction of new 2X40 MVA, 220/33 kV S/S at Keonjhar along with associated transmission line of 3.2 Kms. with an estimated

cost of Rs.29.68 crores and funding from own resources and from financial institutions.

c). Construction of new 2X160 MVA, 220/132 kV & 2X20MVA, 132/33 kV S/S at Lapanga along with associated transmission line with an estimated cost of Rs. 70.19 crores and funding from own resources and financial institutions.

2. The Licensee is required to furnish to the Commission (i) a DPR, (ii) project cost with costbenefit analysis, (iii)information regarding whether it is a new project or an expansion/ up-gradation, (iv) sanctions/ statutory clearance (v) phasing of investment and commissioning schedule, (vi) manner of capitalizing the investment in the revenue requirement, (vii) constraints in making investment, (viii) resource mobilization and financial plans, (ix) process of finalizing the tender through Commission's approved transparent procedure, and (x) any of the item as required by the Commission.
3. On examination of the application of OPTCL, it is found that the investments have been justified for improvement of power supply system, reducing loading on certain line section of OPTCL's network, reducing the overall/ transmission losses and improvement of voltage profile. OPTCL has made the system study with the existing arrangement and the proposed arrangement for three investment proposals. The BoD of OPTCL has accorded the approval for the aforesaid projects in its 29<sup>th</sup> Meeting held on 09.02.09.
4. The present power supply to Udala and its adjoining areas namely Khunta, Udala and Kaptipada are through 33 kV Udala feeder from 132/33 KV sub-station at Baripada. OPTCL submitted that it is difficult to maintain the said line as this feeder is around 60 KM long and passing through hilly & forest area. Also, the Voltage profile at the above 3 nos 33/11 KV sub-stations is very low. The proposed 2X12.5 MVA 132/33 KV S/S at Udala is required to improve the quality and reliability of power supply to Udala at 33 KV level as well as to minimize losses & also to meet the present and future load demand of this area. Further the existing 33 KV network of Khunta, Udala, Kaptipada, Badasahi and Manatri area can be connected to this proposed sub-station so that the burden on the 132/33 KV transformers at Baripada sub-station can be reduced.

5. The present power supply to Keonjhar and its adjoining area are at 33 KV from 132/33 KV sub-station at Polasponga. Existing one 33 KV feeder is feeding power to industries and other two nos 33 KV feeders namely Keonjhar-I & Keonjhar Express are catering to the area load demand. As submitted by OPTCL all the 33 KV feeders have already reached their optimum loading capacity and the voltage profile of the receiving 33/11 kV sub-stations are very low. Also, the demand of power in Keonjhar area is increasing day by day due to upcoming sponge Iron & steel plants & Re-rolling plants etc. Hence OPTCL submitted that the proposed 2X40 MVA, 220/33 kV S/S at Keonjhar could meet the present as well as the future demand of Keonjhar & also reduce the burden on 132/33 kV transformers at Polasponga.
6. The present load in and around Lapanga area is met from 132/33 KV grid sub-station at Sambalpur which is around 40 KMs. away. The load demand of Sambalpur sub-station is increasing rapidly due to growth of Sambalpur town and its adjoining area. OPTCL submitted that the availability of additional power to meet the demands of up-coming industries around Lapanga is not now feasible from Sambalpur grid sub-station. Hence, in order to cater to load demand of upcoming industries around Jharsuguda and Sambalpur, OPTCL proposed to construct a 220/132/33 KV sub-station at Lapanga with connectivity from existing 132 KV Burla-Budhipada D.C. line, 132 KV S.S. Shyam DRI-Rourkela line and 220 KV Budhipadar-Burla D.C. line to Lapanga sub-station. OPTCL submitted that after commissioning of Lapanga 220/132/33 KV sub-station, there would be improvement in quality and reliability of power supply in the western parts of the State and the burden on Budhipadar and Tarkera 220/132 KV auto-transformers could also be reduced. Further, it would facilitate Budhipadar sub-station to meet the future load growth in and around Jhassuguda.
7. Further, OPTCL has submitted the techno-economic analysis which is summarized as below:
  - i) For Udala 132/33KV, 2x12.5 MVA Substation, OPTCL has projected the reduction of average annual loss to the extent of 0.351MW, which with consideration of Rs.2.17/ KWH, comes to

Rs.26.133 lakh in monetary term. Expectation of full utilization of 2x12.5 MVA capacity at the proposed grid S/S and with 4% transmission loss shall make available additional 794.707 LU, which shall cause OPTCL to earn additional annual revenue of Rs 162.915 lakhs at the wheeling cost of 20.5 paise. Thus, OPTCL expects total annual revenue from investment of proposed Udala S/s to the tune of Rs. 189.048 lakhs. The average rate of annual return has thus been found to be 6.316%.

- ii) For Keonjhar 2X40 MVA, 220/33 kV S/S, OPTCL has projected the reduction of average annual loss to the extent of 1.057MW, which with consideration of Rs.2.17/ KWH, comes to Rs.78.700 lakh in monetary term. Expectation of full utilization of 2x40 MVA capacity at the proposed grid S/S and with 4% transmission loss shall make available additional 2543.063 LU, which shall cause OPTCL to earn additional annual revenue of Rs 521.328 lakhs at the wheeling cost of 20.5 paise. Thus, OPTCL expects total annual revenue from investment No. 2 to the tune of Rs. 600.028 lakhs. The average rate of annual return has thus been found to be 20.211%.
- iii) For Lapanga 220/132/33 kV S/S (2X160 MVA, 220/132 kV & 2X20MVA, 132/33 kV) , OPTCL has projected the reduction of average annual loss to the extent of 2.187 MW, which with consideration of Rs.2.17/ KWH, comes to Rs.162.832 lakh in monetary term. Expectation of full utilization of 2x160 MVA capacity at the proposed grid S/S and with 4% transmission loss shall make available additional 5812.716 LU, which shall cause OPTCL to earn additional annual revenue of Rs 1191.607 lakhs at the wheeling cost of 20.5 paise. Thus, OPTCL expects total annual revenue from investment No. 3 to the tune of Rs. 1354.439 lakhs. The average rate of annual return has thus been found to be 19.295%.

- 8. From the project implementation schedules submitted in the Transmission Project Reports, the S/S at Udala was expected to start from April, 2009 and

to be completed by June, 2011., the S/S at Keonjhar was expected to start from April, 2009 and to be completed by April, 2011 & the S/S at Lapanga was expected to start from June, 2009 and to be completed by December, 2011.

9. OPTCL stated that the procurement of materials and services shall be taken up through Competitive Bidding. The entire work for these proposed projects shall be treated as single packages and the award would be made on Turn-key basis for the three individual proposals.
10. As stated by OPTCL, clearance of forest and environmental are not required for these projects. OPTCL has submitted the Environmental Impact Assessment (EIA) Study for three projects.
11. Further, the petitioner stated that the surveys for the above projects have been completed and land has also been acquired. The Commission enquired about the time taken for completion of the projects from this stage. The petitioner stated that minimum two working seasons were required to complete the projects.
12. The NPV and IRR of the project at Udala comes to negative. The Commission enquired about the viability of the said project. The petitioner stated that Socio economic condition of that area should be considered by the Commission and approved as Social benefit scheme.
13. With regard to the observation of the Commission that all the remaining projects for the current year should be brought in one shape in the form of a comprehensive investment proposal instead of coming in a piecemeal manner, the petitioner stated that this would be possible only if suitable land is available at a time in different proposed project areas but this is not practically possible .It takes a considerable time to finalize the project site after long persuasion and protracted discussion, verification of land records etc. It also takes considerable time from the date of submission of proposal before the Govt. for ensuring that the identified patch of land could be finally alienated in favour of the licensee. After the land alienated in favour of OPTCL, the survey in respect of the associated transmission line could be taken up. As there are a number of projects, the identified sites are to be shifted to different alternate sites resulting in inordinate delay. He also

stated that it was not possible to submit a comprehensive investment proposal with all the remaining projects in one shape in view of the inordinate delay in firming of the allotment of land. As and when the allotment of land is firmed up, the DPR is prepared and the projects submitted for approval of OERC.

14. Prima-facie it appears that the investment proposals submitted by OPTCL are meant for improvement of transmission system and there is need for such investment. The petition is admitted. The Commission also observed that since the projects are awarded on turn-key basis, different activities such as procurement of material, day to day execution etc. need be vigorously monitored by OPTCL. The contractor must complete the entire job as per the specification and handover to OPTCL within specified time.
15. It is understood that OPTCL has awarded most of the projects to PGCIL for execution providing 22% supervision charges. The commission suggested the petitioner that the work should be taken up by the OPTCL independently rather than awarding to PGCIL.
16. In reply to a query, it was confirmed by OPTCL, that all the three projects are of OPTCL's standard design; the bidding specifications are available, approval of the Board / Govt. for investment has obtained, required land has been acquired and identified, the Commission, therefore, desires that the 'TURN-KEY' tender be floated within (a) one (01) month of the date of this order and the contract be awarded positively by 31.12.2009, so as to maximum use of the remaining working season for completing the civil work portion before the onset of the monsoon of 2010.
17. OPTCL is directed to identify its Contract Management Wing and the official responsible for the execution of project and submit by 15.09.2009 the time line of completion of different milestone of the project, alongwith details of incentive/ penalty scheme for early completion / delay of adhering to the schedule of the identified milestone. No cost overrun due to time overrun will be normally allowed by the Commission for inclusion in the

Capital cost for determination of OPTCL's transmission tariff unless explained with detailed reasoning, thereof.

18. The Commission grants in principle approval to the above projects and directs that no-time and cost over run shall be allowed over and above the actual cost estimate to be submitted after finalization of the tendering which shall clearly mention the date of completion of the projects. A suitable Sr. Officer with adequate administrative and financial power should be entrusted with the execution of these projects in time.
19. The Commission directs OPTCL to file the details of all projects relating to setting up of lines and substations to be undertaken during the FY 2009-10 at a time as far as possible and not in a piecemeal manner. When the upcoming load and its nature is known to the licensee through load forecasting, the licensee adhering to piecemeal submission of projects as and when it desires, looks unrealistic. No amount of justification by the licensee shall be sufficient enough to justify the business plan it is looking for.
20. Accordingly, the case is disposed of.

**(B.K. Misra)**  
**Member**

**(K.C. Badu)**  
**Member**

**(B.K. Das)**  
**Chairperson**