

**ORISSA ELECTRICITY REGULATORY COMMISSION  
BIDYUT NIYAMAK BHAVAN  
UNIT-VIII, BHUBANESWAR – 751 012**

Present :        Shri B.K.Das, Chairperson  
                      Shri K.C.Badu, Member  
                      Shri B.K.Misra, Member

**Case No. 27/2011**

OPTCL	.....	Petitioner
Vrs.		
WESCO, NESCO, SOUTHCO, CESU & DoE	.....	Respondent

**In the matter of :**    **Investment approval for construction of 132/33 kV Grid S/S at Olavar and 220/132 kV Grid S/S at Kesinga along with associated transmission line on availing loan assistance from suitable funding agency.**

For Petitioner:        Shri Ranjit Das, Sr.G.M.,TPCC, Shri L.R.Dash, AGM(Elect), OPTCL.

For Respondent:      Shri L.R.Padhi, DGM, (COM), CESU, Shri P.K.Sahoo, S.E.(R.A),  
WESCO & Shri S.C.Mohanty, Legal Consultant, DoE

**Date of Hearing:22.06.2011**

**Date of order: 25.06.2011**

**ORDER**

OPTCL has submitted an application dated 23.03.2011 for approval of investment of Rs. 109.82 Cr. for construction of the following two new substations and associated lines.

- (i) Construction of new 2X20 MVA, 132/33 kV sub-station at Olavar in Kendrapada District along with associated transmission line with an estimated cost of Rs. 33.94 crores with funding from own resources and from financial institutions.
- (ii) Construction of new 2X160 MVA, 220/132 kV sub-station at Kesinga in Kalahandi District, along with associated transmission line with an estimated cost of Rs.75.88 crores with funding from own resources and from financial institutions.

The total investment has been estimated to be Rs.109.82 cr.

2. As per License Condition 10 read with Condition 23.1 of OPTCL, approval of the Commission is required for cost beyond Rs.10.00 Cr. The investment sought for the individual proposals as also the total proposals stated above exceed Rs.10 cr. As per the Licence Condition, the Licensee is required to satisfy to the Commission (i) about need of such investment; (ii) that it has examined the economic, technical and environmental aspects of all alternatives.

The Licensee is required to furnish to the Commission (i) a DPR, (ii) project cost with cost benefit analysis, (iii) 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 two investment proposals. The Board of Director of OPTCL has accorded the approval for construction of new 2X20 MVA, 132/33 kV sub-station at Olavar in Kendrapada district along with associated transmission and construction of new 2X160 MVA, 220/132 kV at Kesinga in Kalahandi District, along with associated transmission line in its 42<sup>nd</sup> Meeting held on 16.08.2010.
4. The present power supply to Olavar area is through 11 KV from Rajkanika 33/11 KV S/s and Rajkanika is getting power at 33 kV from 132/33 kV S/S at Pattamundai, which is 31 KMs away. A 33/11 KV S/S at Olavar has been taken up by OPTCL. The feeder is fully loaded and voltage in Aul, Rajkanika, Olavar area is below the permissible limit, as the feeder is routed through Aul and Rajkanika area. In order to eradicate the low voltage problem, minimize interruption and also to accommodate the future demand/load growth, it is

proposed to construct a new 2X20 MVA, 132/33 kV sub-station at Olavar. The supply to the proposed S/S can be made by drawing of 29.04 KM 132 KV D/c line from existing 132/33 kV grid S/S at Pattamundai. Further, power supply to Binjharpur are aof Jajpur district and Tihidi area in Bhadrak area can be extended from the proposed Olavar 132/33 KV S/S to eradicate low voltage problem in those areas. The proposed S/S at Olavar shall also meet the power demand of consumers expected to come under MNP, RGGVY & BGJY schemes.

Further, after implementation of the aforesaid project, there will be improvement in quality and reliability of power supply and availability of alternate source of power supply to Olavar area.

5. The present power supply to Kesinga and its adjoining area are met through a 132 kV S/c feeder from 220/132 KV grid sub-stations at Theruvali, which is 106 KMs away. It is very difficult to maintain the quality & reliability of power supply as the line is very long. Also power demand of Junagarh, Khariar, Saintala 132/33 KV S/S are being met through this S/c feeder, for which low voltage is being experienced at Junagarh and Khariar 132 KV S/S during peak load hours. Loading on Theruvali-Kesinga 132 KV S/S line may further increase due to the proposed additional 132 KV grid S/S which are under construction at Bhawanipatna & Nuapada. Further, the electricity demand is likely to increase due to demand of upcoming mineral based industries around Kesinga area and quality & reliable power supply is a mandatory obligation cast upon the STU, hence, it is proposed to construct a new 2X160 MVA, 220/132 kV sub-station at Kesinga adjacent to the existing 132 KV grid S/S at Kesinga alongwith a 220 KV D/C transmission line of length 79.378 KM having connectivity with existing 220/132 KV S/S at Bolangir.

Hence, OPTCL has justified the need of the aforesaid two projects.

As submitted in the expenditure statement, OPTCL anticipated to incur an expenditure of Rs.2500 lakh each in the year 2011-12 and 2012-13 and

Rs.2587.582 lakh during 2013-14 for its Kesinga project and Rs.1300 lakh, Rs.1200 lakhs and Rs.893.815 lakh during 2011-12, 2012-13 and 2013-14 respectively for its Olavar project.

6. OPTCL has made the techno-economic analysis which is summarized as below:
  - (i) In respect of construction of new 2X20 MVA, 132/33 kV sub-station at Olaver in Kendrapada District along with associated transmission line, OPTCL has projected the reduction of average annual loss to the extent of 0.486 MW, which with consideration of Rs.2.17/ KWH, comes to Rs.36.185 lakh in monetary term. Expectation of 60% utilization of 2x20 MVA capacity at the proposed grid S/S and with 4% transmission loss shall make available additional 1271.532 LU, which shall cause OPTCL to earn additional annual revenue of Rs.298.810 lakhs at the wheeling cost of 23.5 paise. Thus, OPTCL expects total annual revenue from investment No. 1 to the tune of Rs.334.995 lakhs. The average rate of annual return has thus been found to be 9.87%.
  - (ii) In respect of construction of new 2X160 MVA, 220/132 kV sub-station at Kesinga in Kalahandi District, along with associated transmission line, OPTCL has projected the reduction of average annual loss to the extent of 2.795 MW, which with consideration of Rs.2.17/ KWH, comes to Rs.208/103 lakh in monetary term. Expectation of 60% 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.1365.988 lakhs at the wheeling cost of 23.5 paise. Thus, OPTCL expects total annual revenue from investment No. 2 to the tune of Rs.1574.091 lakhs. The average rate of annual return has thus been found to be 20.746%.
7. From the project implementation schedules submitted in the Transmission Project Reports related works of the S/S at Olaver, Kendrapada has been started from Feb, 2011 and is expected to be completed by December, 2013., initial working of the S/S at Kesinga, Kalahandi has been started from Feb, 2011 and is expected to be completed by December, 2013.

8. As submitted by OPTCL, these projects are not having any adverse impacts on environment and overall impact of the projects are highly positive. OPTCL has submitted the Environmental Impact Assessment (EIA) Study for the aforesaid two projects.

OPTCL stated that the procurement of materials and services shall be taken up through National Competitive Bidding. The entire work for these proposed projects shall be treated as single packages separately and the award would be made on Turn-key basis to a singly party for the two individual proposals.

9. During the hearing on dt.05.05.2011, the Commission had directed the OPTCL to have prior consultation with concerned DISCOMs before submission of any transmission project proposal for approval, for which DISCOMs should make them available their requirements during such consultations so that due considerations shall be given by OPTCL while planning for any transmission project in the State. OPTCL has been directed to have a detailed discussion in the matter and file the outcome of the discussion alongwith views/observations, if any. In compliance to the aforesaid orders of the Commission, OPTCL has submitted that the beneficiaries i.e. WESCO, CESU and NESCO are in agreement agreed as the proposed projects are highly essential in view of the low voltage problem persisting in the areas around the said proposed projects. The justification for the same has also been deliberated in para 4 and 5 above. OPTCL has also agreed to consider the proposal of 220 KV connectivity between Indravati and Kesinga, as raised by WESCO, after detailed analysis and promised to take steps to plan for provision of two sources of 132 KV supply to every 132/33 KV grid S/s. The Commission had also directed that transmission system should be operated in a ring system for efficient and reliable operation
10. During hearing on 22.06.2011, CESU has submitted that the construction of 2X20 MVA, 132/33 KV sub-station at Olavar in Kendrapara District alongwith associated transmission line shall improve the quality and reliability of power as well as minimize interruptions in Aul, Rajkanika area. NESCO has also submitted that proposal of the aforesaid S/s shall be helpful for extending quality power to Chandbali area. Further, WESCO has also extended its consent

and fully agreed with the investment proposal of OPTCL as regards to construction of 2X160 MVA, 220/132 KV S/s at Kesinga in Kalahandi District.

11. After hearing all concerned and going through the records, the Commission directs as hereunder:
  - (i) In view of the exigencies of the proposed projects, the Commission hereby grants approval to the prayer made by OPTCL. However, OPTCL is required to follow all the statutory requirements and clearances for carrying out the projects. OPTCL should see that there is absolutely no time or cost over run and the requirement of DISCOMs should be accommodated while executing the projects, if not already incorporated in the original DPR by making suitable modifications to avoid duplication of work at a later date. DISCOMs should also be intimated before hand to be ready with their downward evacuation arrangement to derive the ultimate benefit.
  - (ii) The investment proposal should be in accordance with the requirement of DISCOMs. OPTCL should chalk out the plan of execution so that the proposed projects shall be completed within the specified time.
  - (iii) For any future projects, OPTCL should have prior discussions with DISCOMs and all investments required are to be in accordance with Clause 7 of the General Conditions of Transmission License.
  - (iv) OPTCL is also directed to delegate adequate technical, administrative and financial power to those officers entrusted with timely completion of the proposed projects.
  - (v) OPTCL is directed to submit a road-map with timelines for the execution of the project and submit the bar chart & the write up for their plan of financial closure and execution plan. The report may be submitted for perusal/information of the Commission with copy to DISCOM concerned within 30 days of issue of this order.
12. With the above directions and observations the two investment proposal estimated as 109.82 Cr. is hereby approved and accordingly the case is disposed of.

Sd/-  
**Member (M)**

Sd/-  
**Member (B)**

Sd/-  
**Chairperson**