

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

M/s OPTCL	Petitioner
Vrs.		
M/s WESCO & Others	Respondents

For Respondents :Sri Manas Kumar Das,(PT),CSO,WESCO,NESCO& SOUTHCO, Shri B.K.Lenka, COO,CESU and Shri S.C.Mohanty, LegalConsultant, DoE,GoO.

- (i). Replacement of ACSR Panther conductor by ACCR (Aluminum Conductor Composite Reinforced) conductor in 132 kV Chandaka-Mancheswar Ckt-II up to double isolator points at both ends of length 5.52 kms alongwith hardwares & accessories with an estimated cost of Rs. 5.52 crores with funding from own resources and from financial institutions.
- (ii). Replacement of ACSR Panther conductor by ACCR conductor in 132 kV Chandaka-Ranasinghpur up to double isolator points at both ends of length 24.78 kms alongwith hardwares & accessories with an estimated cost of Rs. 24.78 crores with funding from own resources and from financial institutions

The total investment has been estimated to be Rs. 30.30 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 system and environmental aspects of all alternatives.
- 3 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.
4. On examination of the application of OPTCL, it is found that the investments have been justified for the immediate implementation of additional system reinforcement of its transmission network to meet the system need for the years immediately beyond 2010. The proposed project to be implemented by OPTCL on availing loan assistance from any commercial Bank is the immediate priority and as a part of long term system reinforcement required for the state. The proposed addition will improve the system security and supply standards of the OPTCL transmission network within the Bhubaneswar city. The requirement for OPTCL to undertake such investment is to provide an efficient, co-ordinated and economical system of transmission as mandated under Condition 7.1 of licence conditions of OPTCL and as per provisions contained in section 40 of the Act. The technical, economic and environmental aspects of the investment have been considered in compliance with condition 10 for major investments of aforesaid licence conditions. OPTCL has proposed the investment taking into account the fundamental requirements of ensuring the quality of supply to consumers and

enabling OPTCL to receive an economic return. OPTCL has also submitted a comprehensive expenditure analysis with other options like laying of underground EHT cable vis-à-vis the Over Head line.

5. OPTCL further submitted that the proposed investment shall bring overall improvement of power supply system with main thrust on strengthening the transmission system, minimize interruption of power supply to consumers, minimize forceful power cuts in future under Mancheswar & Ranasinghpur command areas, enhance security/reliability of the power system and evacuate additional power with same ROW.
6. The BoD of OPTCL has accorded the approval for replacement of ACSR Panther conductor by high capacity ACCR conductor in 132 kV Chandaka Mancheswar Ckt-II & 132 kV Chandaka-Ranasinghpur line vide Resolution No. 32 in its 42nd meeting dated 16.08.2010.
7. During last Summer, the loading of Chandaka-Mancheswar Ckt-II and Chandaka-Ranasinghpur line has reached 430 Amps and 400 Amps respectively although the safe loading capacity of existing panther conductor is 400 Ams (80 MW). At present, the demand of Bhubaneswar city has reached 230 MW, which is fed from Chandaka Grid (57 MW), Mancheswar Grid (86 MW), Ranasinghpur Grid (75 MW) and Badagada Grid (12 MW). Manceswar grid is connected with Chandaka by two 132 kV lines. Out of these two, one feeds Mancheswar(Ckt-II) and the other feeds Phulnakhara, Cuttack & Jagatsinghpur Grids(Ckt-I). Likewise, Ranasinghpur Grid is also connected with Chandaka by two 132 kV lines, one is feeding to Ranasinghpur and other to Badagada, Nimapara and at times to Puri Grid S/S. Further, due to high paced load growth of around 15% per annum within the city, already burdened existing transmission lines to Mancheswar & Ranasinghpur shall be insufficient to meet the future load growth.
8. OPTCL also submitted that after installation of another 40 MVA transformer at Ranasinghpur, Mancheswar and Ranasinghpur S/S will have 120 MVA of transformation capacity each and Badagada will have 80 MVA transformation capacity and it has also been decided to install 3X 60 MVA transformers at Chandaka, thus transformer capacities are duly upgraded/ being upgraded to meet the growing demand of Capital City. The only constraint for power evacuation

- will be the line capacity, hence upgradation of line capacity is absolutely necessary for extension of quality and reliable power to the consumers of in and around Bhubaneswar.
9. Further, after replacement of existing Panther conductor with high capacity ACCR conductor, the transmission capacity can be enhanced to two times. The ACCR equivalent of Panther having less specific weight and high tensile strength can carry more than 800 Amps and can safely be strung on the same existing towers. Hence OPTCL has justified the need of the project.
 10. OPTCL has made the techno-economic analysis which is summarized as below:
For replacement of ACSR Panther conductor by high ampacity ACCR conductor in 132 kV Chandaka Mancheswar Ckt-II & 132 kV Chandaka-Ranasinghpur line, OPTCL has projected that with expectation of 60% utilization of 160 MW additional capacity and with 4% transmission loss shall make available additional 807.322 MU of energy, which shall cause OPTCL to earn additional annual revenue of Rs 18.972 Crores at the wheeling cost of 23.5 paise. Thus, OPTCL expects total annual revenue from the said investment to the tune of Rs. 18.972 Crores. The average rate of annual return has thus been found to be 62.61%.
 11. From the project implementation schedules submitted in the Transmission Project Reports, replacement of ACSR Panther conductor by ACCR (Aluminum Conductor Composite Reinforced) conductor in 132 kV Chandaka-Mancheswar Ckt-II is expected to start from July, 2010 and to be completed by January, 2011 and replacement of ACSR Panther conductor by ACCR conductor in 132 kV Chandaka-Ranasinghpur line is expected to start from July, 2010 and to be completed by March, 2011.
 12. As stated by OPTCL, environment & forest clearance is not required for its project as re-conductoring is to be carried out along the existing route and on the existing towers.
 13. 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 a single package and the award would be made on turn-key basis to a single party or a joint venture.

14. During the course of hearing on 01.10.10, in regard to the plan of execution and technical justification of the project, CGM(O&M) on behalf of OPTCL replied that the project is beneficial to the state and shall be helpful for strengthening of transmission system to cater to the future load growth, minimize interruptions, improvement of voltage profile, enhance security and reliability of the system.. OPTCL stated that the project will be executed with loan assistance from any commercial bank or from any suitable funding agency.

Commissions directives/Observations:

1. The Commission desired to know the plan of execution so that the proposed projects could be completed within the specified time. OPTCL stated that the detailed specification has already been prepared and tender has been floated. The Commission directed to develop a strategy and to have a dedicated Project Management Group to expedite the execution of the project. In reply to a query, OPTCL replied that the existing ACSR conductor can carry maximum 400 Amps at normal temperature, where as, the proposed ACCR conductor will safely carry 800 Amps with the same temperature level.
2. CESU, being one of the primary beneficiaries of the said up-gradation has not raised any objection for the said investment. Further, on the prayer of extension of time by WESCO, NESCO and SOUTHCO in this matter, the Commission feels that there is no justification for such extension at this moment. However, for overall benefit & to supply quality and reliable power to the consumers OPTCL may go ahead with its proposal and should complete it within the time schedule. In line with earlier orders, OPTCL is hereby once again directed to have prior consultation with the DISCOMs before submission of any transmission project proposal to OERC for approval. In future any proposal of OPTCL for system up gradation ,new grid substations/Transmission lines etc. should accompany with the minutes of the consultation with the distribution companies.
3. The Commission, therefore, hereby accords in-principle approval to the above projects and directs that the replacement of ACSR Panther conductor by ACCR conductor in 132 kV Chandaka-Mancheswar Ckt-II (Route length 5.52 Kms)

- should be completed within **31st March, 2011** and replacement of ACSR Panther conductor by ACCR conductor in 132 kV Chandaka-Ranasinghpur line (Route length 24.78 Kms) should be completed within **30th September, 2011**.
4. OPTCL should submit the actual cost estimate after finalization of the tendering and should adhere to the date of completion. It is hereby made it clear that the time and cost over-run if any, occurred during completion of the project should be booked to the account of OPTCL and should not be passed over to the consumer of the state.
 5. Accordingly, the case is disposed of.

Sd/
(B.K. Misra)
Member

Sd/
(K.C. Badu)
Member

Sd/
(B.K. Das)
Chairperson