

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

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

Case Nos.2/2009 & 106/2010

In the matter of: Permission for lease line data communication facility to the captive generating plants & 'Draft Procedure on Communication and Data Transmission' framed by OPTCL.

And

In the matter of: Application for seeking direction to OPTCL and permission to use leased line for communication and data transmission.

For the petitioners : For CCPPO in Case No.2/09 - Sri Sanjeev Das, Secretary
For M/s OCL India Ltd. in Case No.106/10 - Sri R. Pandey, Dy.
Executive Director & Sri Suryakanta Pati, Sr. Manager

For the respondents: For OPTCL- Sri A.C. Patra, DGM (Telecom), Sri A.K. Pattanaik.
DM (Telecom), Sri S.C. Panigrahi, Manager (Telecom), SLDC.
For OHPC- Sri M. K. Swain, DM(Elect),
For M/s OCL India Ltd. - Sri R. Pandey, Dy. Executive Director
Sri R. P. Mahapatra in Case No.2/09.

Date of Hearing: 03.08. 2010

Date of Order :20.09.2010

ORDER

Case No. 106/2010 is taken up for hearing on question of admission. Heard the petitioner. Petition admitted. As the matter is related to the Case No. 2/09 (a disposed of case) and in that case the Commission had given direction to M/s OPTCL not to insist on a particular type /mode of communication like PLCC, if the leased line mode of communication is found to be technically and economically suitable and may allow the requester/ user to adopt the same in a non-discriminatory manner. M/s OPTCL was further directed to develop a mutually agreed procedure for communication and data transmission after consultation with all the stake holders. The aforesaid direction of the Commission has not yet been carried out till today, so both are clubbed together i.e., Case No. 2/09, which is reopened for hearing along with Case No. 106/2010, as they are similar in nature.

2. Secretary, CCPPO approached the Commission on 05.12.08 to pass an order for according permission for utilizing dedicated leased data communication facility or Fibre Optic Communication (FOC) facilities (i.e. as an alternative mode of communication) for the CGPs instead of only PLCC being insisted upon by OPTCL.
3. The Commission after hearing all concerned had directed OPTCL vide its order dt.15.07.09 in Case No.02/2009 interalia to publish a Draft Procedure for Communication and Data Transmission inviting comments for wider consultation and then , prepare an agreed procedure after considering comments from the stakeholders and finally submit the same to the Commission for approval.
4. Complying to the Commission's above order, OPTCL submitted the revised procedure to the Commission on 16.01.10. The same was examined by the Commission staff and OPTCL was directed on 30.03.10 to resubmit the revised procedure considering the comments of the Commission staff, which were briefly on the following principal issues:
 - Specify the data/information required to be furnished by user and requester.
 - Whether the stakeholders' views & suggestions have been considered in the draft procedure. OPTCL should furnish the justification on acceptance or refusal of stake holder's item-wise suggestions.
 - Whether recent technological development and/or cost optimization has been considered or not, while stipulating appropriate communication facilities.
 - Whether STU has studied the practices being followed by CTU and other STUs in the country, while framing the procedure.
 - Whether, it shall be preferable that henceforth, OPTCL/STU does the project for and at the cost of the users.
5. OPTCL complied with the above direction vide its affidavit dt.30.06.10, whereby the aforesaid issues were replied by them as follows:
 - The users and requesters are required to furnish data/information for

voltage, frequency, line flows (MW, MVAR), status of breakers, isolator position, replay operation and online transformer tap position of its generating/receiving sub-stations.

- The suggestions/views of stakeholders have been taken into consideration for inclusion in Draft Procedure as far as practicable in line with the provision of OGC Regulations, 2006 and looking into the interest of power system operation. However, the views of stakeholders which are against the interest of system operation have not been taken into consideration for inclusion in the Draft Procedure.
 - OPTCL considers the PLCC or optic fibre communication system due to their performance reliability, safety and quality of service as well as ease of maintainability. OPTCL opined that the leased line system has disadvantages due to frequent failure, dependence on 3rd party for maintainability and threat of intrusion causing crashing of data server. OPTCL has invested huge amount so far on PLCC and optic fibre communication for the above reason and shall continue to do so for the future projects. Choice of the communication system adopted has caused minimum investment plan for OPTCL.
 - Sub-LDCs /SLDC of eastern, western, northern and southern regions have adopted PLCC/microwave communication/optic fibre communication.
 - Due to shortage of adequate manpower, OPTCL can not at present do the work for and at the cost of the users. However, on availability of requisite manpower and adopting the quick procurement procedure in line with PGCIL, OPTCL can take up the project at the cost of the users.
6. OPTCL also submitted during the hearing that SLDC is facing a lot of problems to get the data from M/s. HINDALCO and M/s. IMFA presently being connected through leased lines.

In the meanwhile, M/s. OCL India Ltd. came up to the Commission with a prayer to be allowed the facility of leased line communication, which was registered as Case No.106/2010.

7. After hearing both the cases on 03.08.10, the Commission directed that both the parties to file their written submission, if any, to the Commission on or before 13.08.10. Accordingly Sri R. P. Mahapatra and OPTCL have filed their written submission on 13.08.10 and 16.08.10 respectively.

8. Sri Mohapatra had cited Regulations 4.11, 4.13(1)(d), 4.15(1) of OGC and reiterated that OPTCL should not insist for a particular mode/make of communication system and has prayed that the Commission may issue a Practice Direction under Regulation 14(1) of OGC instead of leaving the matter at the mercy of OPTCL
9. OPTCL has submitted that the plan for adopting of leased line, of any kind, from any service provider by the constituent industries for data transmission from their premises to SLDC may not be accepted keeping in view of its adverse impact on OPTCL SCADA system. Moreover, the fact is that a number of industries belonging to CCPPO group have already established PLCC/SCADA equipment successfully as per the suggestion of STU in line with OGC and therefore, the others may be directed to provide PLCC/SCADA equipment or any other advanced mode of communication like optic fibre communication system through OPGW connectivity only upto the nearest 220 KV sub-stations of OPTCL where SCADA interface point is to be provided in accordance with the amended OGC Regulations. However optic fibre communication through ADSS cable should not be allowed in any case as these are prone to easy snapping and frequent theft for which these are not suitable for use in power sector. Further, the responsibility of procurement, installation and commissioning of PLCC/SCADA equipments may be assigned to the concerned industry only for timely completion of the SCADA integration activities in respect of Users/CGPs under supervision of OPTCL.
10. The Commission has considered the submissions of OPTCL and objections/suggestions of the stake holders. Reliable and efficient speech and data communication is an essential requirement to facilitate necessary communication and data exchange, and supervision/control of the grid by the SLDC in a secure manner, both under normal and abnormal conditions. Accordingly all users, the STU and licensees are required to provide systems to telemeter power system parameter such as flow, voltage and status of switches/transformers taps etc in line with interface requirements & other guidelines of SLDC. Therefore, the OGC had specified that in addition to the required facilities at their respective end, the associated communication system to facilitate data flow upto appropriate data collection point on the STU's system

(i.e. nearest SCADA Interface point made available in every 220 KV grid S/S by OPTCL) shall be established by the concerned users/requesters in accordance with connection agreement. However, for uniformity of data communication system, it is preferable that a uniform mode of data communication links are established to make them compatible with the State Transmission System.

11. Commission observes that there is no difference of opinion between the users and STU/SLDC for establishment of RTU compatible to the SLDC requirement by the user at its premises for sourcing the field data exactly as per the requirement of SLDC. The lack of understanding was only on the issue of communication connectivity between the RTU and SLDC Data Acquisition System. STU/SLDC argues that User should provide communication connectivity between RTU to the nearest SCADA interface points of STU i.e. the nearest 220/132 KV S/S through PLCC. Further for connectivity from the SCADA interface point to the SLDC Data Acquisition system, the responsibility lies with the STU. User argues that STU is yet to establish SCADA interface points in all its 220/132 KV S/Ss. As long as the SCADA interface point is not established by STU in the nearest 220/132 KV S/S even the data connectivity from the RTU to SCADA interface points may not solve the purpose of SLDC. Further, they argued that instead of only PLCC connectivity, any other technically advance mode of communications like Fibre Optic Communication (FOC) or the leased lines provided by any service providers including BSNL should be allowed. In case of leased line, instead of having the data connectivity from RTU to the SCADA interface system (i.e. the nearest 220/132 KV Grid S/S); they can provide data communication from RTU directly to SLDC without any difficulty, thus solving the very purpose of establishment of RTU at their end.
12. OPTCL and SLDC argued that they have faced a lot of difficulties in the performance of existing leased channel connectivity provided by the 3rd party by some existing users. Due to the erratic functioning of the leased channel, their total SCADA functions of SLDC are getting affected and they have to disconnect the leased channel in order to save their existing data bank and, therefore, they are not interested to allow any leased channel connectivity in their system as they fear due to erratic functioning of one or more leased lines, their entire data

system may collapse. However, they have no objection if the user provides Fibre Optic Communications (FOC) from the RTU to the nearest 220/132 KV S/S of STU having SCADA interface facility. Such FOC needs to be provided through OPGW Cable and not through ADSS Cable. The User while agreeing for FOC opines that the OPGW cable in 132 KV line or below is very costly and difficult to erect. No where in the State and possibly in the country, OPGW cable is provided in the 132 KV line or below and it is not yet field proven. Further, the normal power supply system would be affected during the erections of OPGW Cable. The Fibre Optic Cable communication through ADSS Cable either underground or overhead in transmission tower is quite full proof and field proven should be allowed for Fibre Optic Communications. The installation of communication connectivity either through PLCC or through OPGW Cable requires transmission line shutdown in co-ordination with DISCOM official causing hardship to the general consumers, but for FOC through ADSS Cable no shutdown of Powerline is required. OPTCL should take the responsibility of communication connectivity charging the cost to the consumer. For leased line communication, however, user can take up the responsibility of data availability at SLDC end.

13. In view of the implementational difficulties experienced so far, including the large number of litigation brought before the Commission, it is thought proper that two avenues/channels will henceforth be open before the users/requesters for provision of requisite communication system by them. Either the user/requester himself shall provide the entire requirement due on them in accordance with the appropriate approved procedure and due undertaking etc.(wherever necessary), or in the alternative OPTCL, the STU shall provide the requisite communication facilities for and at the cost of such users/requesters.(with the user/requester being responsible only for provision of necessary RTU at their end only). The arguments put forth by OPTCL regarding lack of manpower to do the work for the user and at the cost of them do not look convincing. In fact this will put OPTCL in an advantageous position of selecting the appropriate communication system for integrated development of the state grid and the users /requesters shall also be relieved of the burden of installing and operating the communication system by themselves, for which they may be lacking in adequate expertise. This will be a win-win situation for all concerned and likely to

be preferred alternative since the cost of such investment is also likely to come down in view of efficiency cost of procurement/implementation, due to larger scale of job involved, which may also be regulated by the Commission, in case such investment qualifies as major investment as per their License Condition. Hence, after considering all the submissions, the Commission hereby accepts the procedures (as per Annexure-1 of this order) for voice and data communication to be followed by all the stakeholders including OPTCL/SLDC.

14. Accordingly the cases are disposed of.

**Sd/-
(B.K.Misra)
Member**

**Sd/-
(K.C.Badu)
Member**

**Sd/-
(B.K.Das)
Chairperson**

Annexure-1

Procedure on Communication and Data Transmission

Statement of Object and Reasons:

As per the provisions under Section 32, 33, 39 & 40 of the Electricity Act, 2003, the SLDC & STU respectively have been assigned many statutory function and duties. The SLDC being the apex body shall ensure integrated operation of Power system in the State for achieving the maximum economy and efficiency in operation. Similarly, the State Transmission Utility(STU) is required to ensure development of an efficient, coordinated and economical system Intra State Transmission Lines for smooth flow of electricity from a generating stations to the load center.

2. In order to achieve the above objectives and to implement the Orissa Grid Code Regulation, 2006 as amended from time to time in an equitable and non-discriminatory manner, the State Transmission Utility (STU) hereby make the following procedure for regulating technical standards for connectivity to the grid and establishment of voice and data communication to SLDC, Bhubaneswar in line with the Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations, 2007 and Orissa Grid Code Regulations, 2006.

1) Short title & commencement:

- i) These procedures may be called "Procedure for Provision of Voice & Data Communication facilities.
- ii) These procedures shall come into force on the date of their publication in the official gazette.

2) Definitions :

All the words, phrases, abbreviations etc. shall have the same meaning as provided in the Electricity Act, 2003, Orissa Grid Regulations, 2006 and Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulation, 2007.

3) Responsibility of STU :

The STU shall provide all necessary infrastructures up to all 220kV/132kV grid sub-stations for providing voice and data communication interface points (SCADA interface points).

4) Data Requirement:

All the users/requesters/ Generator including CGPs who are planning to connect to STS or connected to STS shall have to provide the data relating to voltage, frequency, line flows, status of breaker, isolator position and other parameters as prescribed by the SLDC for effective control of the transmission system and operation of Power System by SLDC.

5) Communication System Requirement:

All the users/requesters and Generators including CGPs etc. who are connected to or planning to connect to STS shall provide necessary RTU at its premises and Communication channels/facilities up to the nearest 220/132kV s/s of STU(SCADA interface point) as per the recommendation of the STU. However, the users/requesters/ Generators including CGPs may use the equipments other than those stipulated by the STU provided that they (User/Requesters/ Generators including CGPs) furnish an undertaking to the effect that they (User/Requesters/ Generators including CGPs) shall be wholly responsible for fast and reliable voice/data communication to SLDC in the format annexed in the **Schedule-I** to this procedure.

However, in case the users /requester elects not to provide the aforesaid communication channels/facility himself in order to avoid the difficulty of provision of communication facility in the requisite mode, the STU may provide the same at the cost of the requester/user by getting reimbursed at the beginning of the initial installation and running O&M cost of such communication facility from the user/requester. On that case the undertaking under Schedule-I shall not be required. However, such users/requesters shall be responsible solely for the availability of required voice/data output at their RTU.

6) Applicability of the procedure:

This procedure for voice/data communication shall be applicable to all Users/Requesters/ Generators including CGPs intend to connect with the State Transmission System as detailed under:

- i) All generators/ including CGPs and all users intend to connect/already connected with the State Transmission System (STS) at a voltage level of

132KV shall provide their real time data to SLDC through SCADA.

- ii) All generators/ including CGPs with a generation capacity of above 25 MW connected with STS at a voltage level of 33 KV shall provide their real time drawal data up to the nearest SCADA interface point.
- iii) All Users/Requesters connected with STS at 33KV voltage level or above and having contract demand of 10MVA or above shall provide voice communication system with SLDC.

7) Authorized person for all official correspondence:

The General Manager, Telecom. Circle of the STU, Bhubaneswar or any authorized officers of the STU shall act as the Nodal officer for execution and implementation of this procure.

8) Submission of application for Voice & Data Communication:

The user upon availing permission of its connectivity to the STS by the authorized officer of STU shall write to the G.M. Telecomn. Circle of the STU, Bhubaneswar for preparation of communication system diagram as well as bill of quantities for provision of voice & data communication to the SLDC. The user is also required to send single line diagram of their sub-station and generating station well in advance to the G.M. Telecom. Circle, of STU. *In case the user/requester is a consumer of the DISTCOs, the submission of application to STU should be routed through the respective DISTCOs, who may impose their conditions as are absolutely required indicating the reasons thereof in writing.*

9) Approval of the Communication System:

All the users and Generators including CGPs who have elected to provide the communication channels/facility themselves, shall adhere to the communication scheme as approved by the G.M. Telecom. Circle of the STU or any authorized officer of STU on its behalf. If any deviation is noticed, the user have to execute an undertaking as per the provision of the clause-5 above in the format available in the schedule-I of this procedure.

10) Availability of Spares & Test instruments:

It shall be the responsibility of the User and Generators including CGPs who have elected to provide the communication channels/facilities themselves and are connected to STS to procure & keep sufficient stock of spares and test

instruments as per the recommendation of the STU for smooth and un-interrupted operation of voice and data communication system.

11) Periodic Testing of the SCADA system :

All Users and generators including CGPs who have elected to provide the communication channels/facility themselves shall co-operate with STU for periodic testing of the voice & data communication system as per the recommendation of STU.

12) Direction of STU to the Users :

Non-withstanding anything in this procedure, the direction of STU/SLDC as regard to operation of the voice & data communication shall be adhered-to by the respective Users or Generators including CGPs in the interest of reliable and fast voice and data communication necessary for power system operation.

13) Power to remove difficulties :

Member Secretary, GCC shall remove operational difficulties arising out of implementation of this procedure.

14) Nodal Officer for adjudicating the dispute:

Member Secretary, GCC shall be adjudicating authority for any dispute arising in the implementation of this procure.

15) Penalty for non-compliance of directions:

Each User / Generators including CGPs/Requester who are connected to STS shall have to pay penalty as per the decision of OERC for non-compliance of directions.

16) Appeal & Limitation :

Any User/ Generators including CGPs who are connected to STS may appeal before the Orissa Electricity Regulatory Commission (OERC) against any decision of Member/Secretary, GCC and/or STU/SLDC in the matter of voice and data communication within three months time from the date of communication of such decision.

Schedule - I

UNDERTAKING

(To be executed before a Notary Public on non-judicial stamp paper worth Rs.100/-)

I, Sri S/o.....

Aged about..... years, permanent resident of village P.O.....

P.S....., in the Dist of, State of

The authorized representative of
M/s.....address.....
..... do hereby solemnly undertake that --

- 1) M/s..... shall be responsible for round the clock maintenance of all equipment for voice and data communication from the sub-station of M/s to the nearest SCADA interface point of M/s Orissa Power Transmission Corporation Ltd., a State designated STU for its operating period with effect from the date of commissioning for un-interrupted data/voice communication to the SLDC, Bhubaneswar.
- 2) M/s shall keep sufficient spares/cards/modules and other required materials as may be required for smooth maintenance of equipment for its operating period.
- 3) M/s shall maintain all RTU and communication channel in such a manner so that SLDC will not face any difficulty due to non-availability of data & voice communication.
- 4) In the event of failure of Data/Voice communication continuously for a period of fifteen days or more, Orissa Power Transmission Corporation Ltd., shall be at liberty to disconnect the power supply to M/s or take any such action as deemed proper and just to safeguard the interest of SLDC.
- 5) Any dispute arising out of this undertaking during its validity period, the decision of Orissa Power Transmission Corporation Ltd., shall be final and binding on M/s

This undertaking is made on..... day of20... in presence of the witness.

Witness

- 1) a) Signature.....
b) Full name.....
c) Address.....
- 2) a) Signature.....
b) Full name.....
c) Address.....

For M/s

- a) Signature.....
- b) Designation.....
- c) Full name.....