

# **ORISSA ELECTRICITY REGULATORY COMMISSION**

**BIDYUT NIYAMAK BHAWAN  
UNIT-VIII, BHUBANESWAR - 751 012**

**Web: [www.oriarc.org](http://www.oriarc.org)**

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## **CASE No. 60/2009 & 2/2009**

### **PUBLIC NOTICE**

**Date: 26 /05/2009**

In the matter of: Proposed amendment to Orissa Grid Code (C. No. 60/2009).

And

In the matter of: Application filed by Confederation of Captive Power Plants of Orissa (CCPPO) to grant permission for lease line data communication facility to the Captive Generating Plants (C. No.2/2009).

It is for the information of generators, interested persons and general public that the Commission is going to hear the above mentioned two cases on 10.06.2009 at 11: 00AM. at its hearing hall. The copy of CCPPO's application may be obtained from the petitioner's office at IMFA Building, Bomikhal, Rasulgarh, Bhubaneswar-10 or may be down loaded from OERC's **website: [www.oriarc.org](http://www.oriarc.org)**. The generators/ interested persons/institutions/associations may file their views to the Commission on or before 08.06.2009 serving copy to the petitioner (CCPPO). The generators/ interested persons/ institutions/ associations those who have filed their objections/ suggestions in the above matters may remain present and take part in the aforesaid hearing on the date & time mentioned above.

By Order of the Commission

**SECRETARY**

**BEFORE ORISSA ELECTRICITY REGULATORY COMMISSION,  
BHUBANESWAR**

Filing No.  
Case No 2 of 2009

In the matter of :

An application U/s.86 of the Electricity Act, 2003  
for according a permission for lease line data  
communication facility to the captive generating  
plants

And

In the matter of :

Confederation of Captive Power Plants, Orissa  
having its Regd.Office at IMFA Building,  
Bomikhal, P.O.Rasulgarh, Bhubaneswar,  
Dist.Khurda represented through its  
Secretary Sri Sanjeev Das .. Petitioner

-Vrs-

1. Orissa Power Transmission Corpn. Ltd.  
having its Regd.Office at Janpath,  
Bhubaneswar 751022, Dist.Khurda,
2. State Load Despatch Centre,  
a separate unit under the control of  
Orissa Power Transmission Corpn. Ltd.  
having its Office at Mancheswar,  
Bhubaneswar, Dist.Khurda .. Opp.Parties

The humble petition of the petitioner  
above named

Most Respectfully sheweth :

1. That the petitioner is a body formed by all the major captive power  
producers in the state of Orissa and is registered under the Society Registration

Act, 1960 bearing Regd.No.21980/158 dated 1.12.2004 to do all the objects incidental and conducive to the attainment of objects of the Confederation in the matter of captive generating plants. The petitioner was formed to address not only the issues of the captive generating plants in the State but also served as common platform for all power producing industries. The secretary is empowered and authorised to initiate all legal proceedings on behalf of the Confederation for all captive power producers.

- (A) Hon'ble OERC has invited comments on commercial and metering standards from various stake holders in a public hearing to decide on the commercial and operational metering standards to be followed by the STU and its various constituent members. Hence, airing the difficulties and seeking corresponding solution thereof falls well within the right of the constituent members to the STU till the time the draft OGC is finalized by the Commission.
- (B) Vide Annexure-1 to the counter filed by M/s.OPTCL that the joint application filed by the Confederation is not maintainable and the fact has no basis since the constituent members even if, are loads only (having no CGP), are in the process of evaluating to have their own captive generation provided the environment is conducive to their business interest. Moreover, the Hon'ble Commission has already decided to monitor each generator/load in excess of 5 MW and as such the generators/loads have the common cause of action even if the metering solution is different for different generators/loads depending upon their location, proximity to the EHT grid substation etc. The commercially and technically viable metering solution accepted by the OERC and all stake holders involved, shall result in a larger interest of electricity business in the State of Orissa.
- (C) The application is maintainable as the present scenario of metering standard is affecting many captive generators/loads, which wish to express their willingness to get covered under SLDC discipline with state

of the art technology in communication sector keeping in view the larger volume of meter data communicated to the respective District Control Centres for onward logging and energy audit at SLDC level, particularly under implementation of intra ABT being introduced by Hon'ble OERC from next financial year.

2. That in exercise of the power conferred U/s.39, 131, 133 and 134 of the Electricity Act read with Sec.23 and 24 of the Orissa Electricity Reforms Act, 1995, the State of Orissa published Orissa Electricity (Transfers of Transmission and related activities) Scheme 2005 wherein the Transmission Undertaking (the Undertaking related to the activities of transmission, State Transmission utility and State Load Despatch Centre and act incidental and ancillary thereto) of Grid Corporation of Orissa has been transferred and vested with the Opp.Party No.1 .

3. That the Opp.Party No.2 is a separate entity under the control of Opp.Party No.1 and U/s.32 of the Electricity Act 2003 is the apex body to ensure the integrated operation of power system in the State of Orissa.

4. That presently 21 nos of captive generating plants as detailed in Annexure-1 to this application are the members of the petitioner- confederation and producing electricity through their respective power plants for utilization of the same in their own premises.

5. That the members of the petitioner association have established captive generating stations for requirement of electricity in their own premises. M/s.Indian Metals & Ferro Alloys Limited (in short IMFA) being a member of the petitioner association is in process of installing a 30 MW unit in addition to its 108 MW generating unit at its factory premises at Choudwar.

All bulk loads also are to be monitored through the District Control Centre to SLDC in order to achieve successful implementation of intra-ABT, which is due for implementation in the immediate future. The fact that OPTCL has kept under

scrutiny the system study report prepared by PRDC, Bangalore on the eve of addition of 30 MW unit by IMFA is noted. The result of the scrutiny shall be deliberated further for mutual acceptance by OPTCL and IMFA.

6. That the producers of captive generating units of the petitioner confederation had sought connectivity permission / additional connectivity permission from the Opp.Party No.1 and the same had been granted by the said Opp.Party for the purpose.

7. That as per law, a system study is required to be conducted by PRDC for the additional connectivity permission as aforesaid and the same has been conducted by the said PRDC for the purpose. It will not be out of place to mention here that no system upgradation and revamping of OPTCL/IMFA existing network configuration is needed for the purpose.

ABT compatible meters have been installed at points of transaction between IMFA and OPTCL and all past records are available with energy billing centre of GRIDCO for any assessment whatsoever on the issue.

8. That in case of petitioner confederation's member – IMFA, after addition of one 30 MW power generating unit, IMFA's normal load expansion will be such as to avail for its captive consumption at Choudwar in excess of 51% of generation over real time for all time to come.

OPTCL has mentioned that they have enclosed letter No.TCC-Tech-304/2353 dated 30.8.2008 of G.M. (Telecom), OPTCL (Annexure-3) to the application for reference of IMFA, which is not correct. In the past leased line providers used to offer lease for minimum of 6 months and/or integral multiple thereof. Recently the leased line providers offer lease for a minimum period of one year or any integral multiple thereof, provided permission is accorded by the end user for installing their equipment in their premises.

In earlier years, OPTCL has used leased line of BSNL for many years pending installation of their optical fibre link Jayanagar-Therubali-Narendrapur-Mendhasal-Chandka-SLDC. At the time there was some teething problem in the system and over the years OPTCL has learnt of using leased line and allied optical equipment. Moreover, with the proliferation of communication use, the indigenous manufacturers of optical cables and the associated terminal equipment have come up, thereby there has been a drastic cut in the expenses for adoption of optical fibre equipment in various organizations. It is pertinent to say here that great sensitive organizations in banking, railways, multinationals are swapping great volume of confidential information through leased line without any problem and usage has increased far beyond normal expectations over the years. The optical fibre related equipment are fast replacing the conventional equipment in all sectors. Leased line permission was granted to Hindalco, Hirakud for the purpose temporarily to study the system behaviour and performance over the time and no worthwhile adverse performance so far has been recorded for such use. The comparison statement vide Annexure-2 of the counter affidavit filed by OPTCL was probably drawn years back when the communication system - proliferation was not there in India. Any communication system is to employ a mix of the present state of the art technology available if they are commercially and operationally viable.

The acquired data through RTUs are packet switched and the code for the same is the property of SLDC's SCADA system and as such cannot be decoded by outside agencies having no knowledge of the code. Hence data pilferage or manipulation is a remote question even if some smart person tried for the same.

9. That it will not be out of place to submit here that the Opp.Party No.1 vide its letter No.Tech-304/1964 dated 16.7.2008 had intimated IMFA for doing the needful while enclosing BOQ and approved vendor list for PLCC/SCADA equipment and IMFA had proposed for a SCADA connectivity to Opp.Party No.2 through a leased line from a Telecom Service Provider instead of PLCC, vide

their letter dated 4.8.2008. Photocopy of the said letter is enclosed herewith as **Annexure-1** to this petition for better appreciation of this Hon'ble Commission.

The BOQ earlier submitted by GM (Telecom) at the time, was based on the then prevailing scenario, but subsequently Government of Orissa formed a committee to visit other States to gather data on optical fibre network and cable TV scenario being adopted in various State utilities. Other States have utilized the modern communication technology rampantly for gathering electrical system data through optical fibre and the allowed equipment have performed considerably well as compared to PLCC system equipment. Hence a review is being sought for adoption of alternate communication technology in larger interest of the State and the various utilities including that of STU.

10. That the Opp.Party No.1 have permitted IMFA to establish voice/data communication upto SLDC through leased line on temporary basis vide letter No.TCC-Tech-304 dated 30.08.08. Photocopy of the said letter is enclosed herewith as **Annexure-2** to this petition for better appreciation of this Hon'ble Commission.

Annexure-2 of OPTCL counter is based on old system data and with the advent of new generation equipment, it has lost its relevance.

11. That the said IMFA vide their letter dated 31.10.2008 had intimated the General Manager (Telecommunication) of Opp.Party No.1 that necessary equipment for SCADA connectivity in compliance to the Opp.Party No.1's letter dated 30.08.2008 has already been ordered as per OPTCL/SLDC requirement. The photo copy of the said letter of IMFA to GM (Telecommunication) of Opp.Party No.1 is enclosed herewith as **Annexure-3** to this petition for better appreciation of the Hon'ble Commission.

OPTCL has agreed that a time period of approximately 3 years is required for their optical fibre project covering a large number of substations. The uses of leased line may be allowed atleast upto that length of time till new adoption of technology is stabilized. Adoption of PLCC equipment exclusively on the issue will stifle the business of the associate members of CCPPO as a normal useful period of these equipment are much in excess of three years. So it is a waste of money to adopt PLCC equipment at this point of time where these equipment shall have no use after three years because of obsolescence and adoption of new technology.

12. That it is respectfully submitted that IMFA has requested Opp.Party no.1 for a long term approval of connectivity through leased line till the proposed revamping and realignment of OPTCL network in fibre mode is completed.

With the introduction of 3G spectrum equipment by DOT, the microwave frequency allotted to various utilities by the Wireless Planning Commission (WPC) is being withdrawn. The Indian Army has also grudgingly accepted to surrender the allotted microwave frequency range which is recently published in Indian newspaper including that of the Economic Times of India.

Under the circumstances, the alternate Broad Band communication such as optical fibre will be the only possible replacement and the optical fibre will follow the physical EHT transmission line layout thereby opening many more SCADA interface point particularly in the SEZ belts of Orissa.

13. That the petitioner have come to know from EREB, Kolkata and also from other authentic sources that the State of Orissa is undertaking an ambitious plan to inter-connect the transmission networks through Optical Fibre offering almost Unlimited Bandwidth. It is submitted that the process will reorient the entire transmission network thereby opening of more SCADA access interface points in close vicinity to Choudwar so as to help the nearby industries to look up in the most efficient and least expensive way. Hence it is submitted that till

completion of such revamping, investment on Carrier based PLCC equipment by the industries will become redundant causing unnecessary wastage of resources and a financial drain to the subject industries.

OPTCL has stated that the Carrier Inter tripping Scheme is existing from OSEB period. This fact is only partially true. Carrier inter-tripping was used till the time the distance protection relays of EHT transmission line were electro mechanical or static type. After replacement of the above category of DP Relays by numeric chain of DP relays the associated carrier inter tripping equipment have not been commissioned in conjunction with such relays. The system disturbance report discussed every month by SLDC authority has reportedly pointed out the non-functionality of carrier inter-tripping scheme at the time of need and stressed on commissioning of the above scheme in each feeder where the scheme is available. After the OPTCL adopts the above system, the performance can only be evaluated and till such time other constituent members should be allowed to wait for successful implementation of the scheme which are absolutely mandatory for the maintaining proper health of the grid system. Hon'ble OERC may please ask the OPTCL to formulate action plan in this regard and closely monitor successful implementation of the system in order that the constituents of the STU will be able to share the experience in the line.

14. That it will not be out of place to mention here that the composite GRIDCO (both transmission and power purchase) had availed 350 million dollars of World Bank loan for constructing new transmission line and sub station to meet the future load taken in those transmission line schemes. It was envisaged to provide the ground wire with optical fiber to provide real time data exchange between the generation and load dispatch points. Accordingly transmission lines are to be constructed with OPGW as earth wire, which has in-built facility that needs to be utilized now if the project is already completed and corresponding loading on tariff is passed on to consumers. Once consumers have paid tariff basing on the above loans, OPTCL should make optimal use of the same.

The data transmission is made through IEEE protocol which has been sufficiently tested and accepted internationally to provide adequate firewall against ingress of unwanted external data tampering.

The misconception as regards possible manipulation of data by any external agency is a remote possibility for packet switched data flow between the electrical sub station and the LDCs and this fact has been established also while using BSNL data link for eastern region data transmission from Jayanagar substation onwards.

The Wireless planning adviser, DOT (Department of Telecommunications), Govt of India has already advised PGCIL to inform all electricity utility that the allotment of microwave frequency for power sector data communication is shortly going to be replaced by alternative optical fiber links without disturbing the present data flow. The differential cost will be borne by the DOT for the purpose. While changing over to optical fiber equipment from existing microwave, the optical fiber has to follow the physical EHT circuit lay outs unlike microwave which follow at present the line of sight.

Under the circumstances, the above said arrangement is going to open up more number of SCADA interface points thereby allowing the corresponding industries located in the respective areas to be hooked up at concerned sub station to the main data chain up to SLDC, Bhubaneswar.

It is understood that PLCC equipment are band limited and a narrow band has been allotted for use.

PLCC alone will not suffice to accommodate the large volume of metering needed in the present scenario, hence the mix of different other viable options need be evaluated and given a scope to assess their performance standard. Some of the States have gone to the extent on adopting their independent hubs of INTELSAT for achieving 100% metering and consequent reduction in T&D

loss level upto approx. 17% whereas Orissa is reeling under a T&D loss figures of approx. 50% in the absence of tight energy audit.

Since the energy saved is the energy generated, it is worthwhile to adopt equipment which can enable tight energy audit and consequent reduction in T&D loss.

15. That the petitioner have also come to know that the Opp.Party No.1 is yet to install a scheme on installation of Carrier inter-tripping equipment. Hence it is submitted that the industries under the petitioner-confederation will follow OPTCL's scheme after successful installation of the same and also share their experience on Opp.Party No.1's utility for the system.

Any system when newly introduced faces the teething problem which subsequently stabilizes. There are enough examples of sensitive business organizations who use new generation communication network and achieve excellent business performance. The competition in communication services has ushered in reduction in tariff and the power sector should not lag behind in this regard and should come out of using such equipment approaching fast obsolescence.

16. That it is submitted that the proven alternative is already available to transmit power plant data to SLDC even without PLCC equipment as a medium, if such channels are dedicated for exclusive use for any Close User Group, such as SLDC vis-à-vis Industries/ CPP.

The OGC is in amendment stage and comments have already been invited from all stake holders from bringing in required changes. Hence this is the appropriate time for CCPPO also to suggest the amendment necessary for interest of all concerned.

17. That it will not be out of place to mention here that the Opp.Party No.1 itself has been utilizing leased channels of BSNL for telemetry of SCADA from

Jaypore to SLDC at Bhubaneswar. Hence, it is submitted that in order to expedite the SCADA connectivity of the industries with SLDC, the Opp.Party No.1 needs to permit other industries to avail the outsourced channels of various service providers to facilitate the flow of data from respective industries to SLDC for real time grid operation purpose.

Though PLCC has been accepted as the reliable standard, the volume of usage has proliferated to the extent, which requires use of alternate communication modes or a mix of different communication modes keeping the spirit of the metering usage in tact. Since the coding of the data is a secret property of SLDC, any third party interference will not be in a position to decode as to what kind of data is being transmitted particularly when the data is packet switched. The PLCC equipment has quite large input handling capacity so far as the power system use is concerned, and the industries which earlier have been advised to go for PLCC scheme, are free to form a consortium of generators/loads in their area who can share the full capacity of such equipment while the data gets repeated at successive s/s. when on transit upto the next SCADA interface points. New industries have already procured equipment on their immediate emergency need, they can allow to share the spare capacity to other local loads/generators on cost sharing basis so that their burden is reduced. With the advent of new technology, one has to march with time and adopt new generation equipment. At subsequent stage, suggesting capacity sharing of the existing equipment to a local consortium of industries is possible so then the approach can be considered as nondiscriminatory while ensuring optimal capacity utilisation of the existing equipment and immunization from adjacent channel interference.

18. That in anticipation of the approval from OPTCL authority the member like IMFA has gone ahead with procurement of data acquisition equipment such as RTU and accessories and proposes to transmit the data upto SLDC using

dedicated BSNL leased line keeping in view of the order dated 13.03.2008 passed by this Hon'ble Commission on metering issues

In view of the aforesaid facts the petition of CCPPO has the merit and is maintainable and liable to be considered by Hon'ble OERC.

19. That it is respectfully submitted that the ends of justice would be best served if this Hon'ble Court is pleased to direct Opp.Party No.1 to accord permission to the industries of the petitioner-confederation for of leased line data communication facility.

The answering Respondent craves leave and reserves its right to make further submissions as may in the circumstances be deemed necessary in the interest of justice.

20. That this petitioner is made bonafide and for the interest of justice.

## **P R A Y E R**

It is therefore prayed that this Hon'ble Commission may graciously be pleased to :

- (a) Direct Opp.Party No.1 to accord permission to the captive generating plants of the petitioner-confederation for utilizing the leased line data communication facility while transmitting electricity from their respective units as an alternative to PLCC;
- (b) Direct Opp.Party No.2 to accord permission for open access facility to the captive generating plants of the petitioner-confederation; and
- (c) Pass such other order/orders as this Hon'ble Commission may deem fit and proper;

And for this act of kindness, the petitioner shall as in duty bound ever pray.

By the petitioner

Bhubaneswar  
Date: 24.02.2009

**BEFORE ORISSA ELECTRICITY REGULATORY COMMISSION,  
BHUBANESWAR**

Filing No.  
Case No. of 2008

In the matter of :

An application U/s.86 of the Electricity Act, 2003  
for according a lease line data communication  
facility to the captive generating plants

And

In the matter of :

Confederation of Captive Power Plants, Orissa  
having its Regd.Office at IMFA Building,  
Bomikhal, P.O.Rasulgarh, Bhubaneswar,  
Dist.Khurda represented through its  
Secretary Sri Sanjeev Das .. Petitioner

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1. Orissa Power Transmission Corpn. Ltd.  
having its Regd.Office at Janpath,  
Bhubaneswar 751022, Dist.Khurda,
3. State Load Despatch Centre,  
a separate unit under the control of  
Orissa Power Transmission Corpn. Ltd.  
having its Office at Mancheswar,  
Bhubaneswar, Dist.Khurda .. Opp.Parties

## **AFFIDAVIT VERIFYING THE PETITION OF THE PETITIONER**

I, Sri Sanjeev Das, aged about 42 years, S/o Sri A.K.Das Burma, residing at A/2, H.I.G., Baramunda Colony, Bhubaneswar do hereby solemnly affirm and state as follows:

1. That I am the Secretary of Confederation of Captive Power Plants, Orissa, the petitioner in the above matter and am competent to swear this affidavit.
2. That the statements made in paragraphs 1 to 19 herein above shown are true to my knowledge based on information available on official records of the petitioner-confederation, which I believe to be true and the last paragraph is the Prayer of the petitioner.

**Deponent**

Bhubaneswar  
Date: 24.02.2009

Identified by

Advocate