

**ODISHA ELECTRICITY REGULATORY COMMISSION**  
**BIDYUT NIYAMAK BHAWAN,**  
**UNIT – VIII, BHUBANESWAR – 751 012**  
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**Present : Shri S. P Nanda, Chairperson**  
**Shri B. K. Misra, Member**  
**Shri S. P. Swain, Member**

**Case No. 46/ 2012**

**OPTCL** .....**Petitioner**  
**Vrs.**  
**WESCO & Others** .....**Respondents**

**In the matter of: An application for levy of GRID Support Charges (GSC) for the Captive Generating Plants running in parallel with the grid of the Odisha Power Transmission Corporation Limited.**

**For the Petitioner: Shri N. C. Panigrahi, Sr. Advocate, Shri L. N. Mohapatra, Advocate and Shri S. R. Panigrahi, Advocate, Shri P C Tripathy, CGM (O&M),OPTCL.**

**For the Respondents: Shri Sanjay Sen, Advocate on behalf of M/s. VAL, Shri M.K. Rajguru, Advocate on behalf of NALCO, Shri Manas Kumar Das, GM (CSO), WESCO, NESCO & SOUTHCO, Shri R. P. Mohapatra the authorized representative of M/s. CCPPO, M/s. Emami Paper Mills Ltd., M/s. Adhunik Metaliks Ltd. & M/s Nababharat Ventures Ltd., Shri A K Parida, Chief Resident Manager M/s. Nababharat Ventures Ltd., Shri P. K. Mohanty, President, CCPPO, Shri S K Panda, Secretary, CCPPO, Shri Bibhu Charan Swain, Sr. Consultant on behalf of both M/s. Power Tech Consultants and M/s. VISA Steel Ltd., Shri H. P. Mohapatra, the authorized representative of Shri A. K. Sahani and Shri H R Das, Shri Partha Sarathi Samntara, Sr. Manager & Asst. Manager Law, M/s IMFA and Shri R Pandey, M/s. OCL Ltd. are present.**

Nobody is present on behalf of M/s SML Power generation Ltd., M/s. Maithan Ispat Ltd., M/s. Bhusan Power and Steel Ltd., M/s. Pattnaik Steel and Alloys Ltd., Odisha Spong Iron Ltd., Paradeep Phosphates Ltd. (PPL), M/s. Arati Steels Ltd., M/s. IFFCO, M/s. Rathi Steel and Power Ltd., M/s. Jindal Stainless Steel, M/s. Hindalco, M/s. Aryan Ispat and Power Pvt. Ltd., M/s. Nilanchal Ispat Nigam Ltd., M/s. Shyam DRI Power Ltd., M/s. Tata Sponge Iron Ltd., M/s. Action Ispat and Power Pvt. Ltd., M/s. Dinabandhu Steel and Power Ltd., M/s. Facor Power Ltd., M/s. Ferro Alloys Corporation Ltd., M/s. Shree Ganesh Metaliks Ltd., M/s. Shyam Metaliks and Energy Ltd., M/s. Sree Metaliks Ltd., GRIDCO and CESU.

## ORDER

**Date of hearing:-15.01.2014**

**Date of order: 31.03.2014**

1. The present Petitioner Odisha Power Transmission Corporation Limited (OPTCL) has prayed before this Commission for levy of Grid Support Charges (GSC) on the Captive Generating Plant of Odisha which are running in parallel with the grid of the OPTCL. At present 34 nos. of CGPs are operating in parallel with the network of OPTCL. Some of these CGPs could have run their plant in islanding mode without any connectivity with the grid but are connected with the grid in parallel mode for definite advantages such as improved PLF, higher efficiency, reactive power support, increased fault level etc. Those industries having CGP opted for grid support for safety, security and reliability of operation with a support of a much larger and stable system provided by OPTCL grid. OPTCL not only provide grid support to the CGPs for its smooth and efficient operation but also bear all the harmful effects of their load fluctuations and help in enhancing and stabilising PLF of captive generators. The Petitioner has also brought to our notice a research study submitted by Electrical Research and Development Association (ERDA) to Chhatisgarh Electricity Regulatory Commission on evaluation of parallel operation charges in that State. Basing on that study OPTCL has submitted the evaluation of GSC for representative 7 nos. of CGPs in Odisha. Therefore, the Petitioner claim that those bulk consumers having captive generating plants and operating in parallel with OPTCL system for their smooth operation should pay Grid Support Charges / Parallel Operation Charges to OPTCL. OPTCL has adopted Base MVA Support Method for determination of such charges. Considering transmission related fixed cost for FY 2012-13 as approved by the Commission they have calculated GSC as Rs.28.66/ kVA/month for FY 2012-13.
2. One of the Respondents namely Confederation of Captive Power Plants of Odisha (CCPPO), the representative body of 34 industries owning CGPs expressed their concern about the petition of OPTCL proposing the levy of Grid Support Charges. As submitted by them this is not only arbitrary but also suffers from legal infirmity. There is no provision in Electricity Act, 2003 or in any Regulation of OERC to determine Grid Support Charges or Parallel Operation Charges. They further pointed out the provision in Para 5.2.26 of National Electricity Policy, 2005 notified by Govt. of India which lay emphasis on grid connectivity of captive generators which is reproduced below:

*“Under the Act, captive generators have access to licensees and would get access to consumers who are allowed open access. Grid inter-connection for captive generators*

*shall be facilitated as per Section 30 of the Act. This should be done on priority basis to enable captive generation to become available as distributed generation along the grid.”*

3. CCPPO also brought to our notice the following points for which levying of Grid Support Charges are not relevant as per them.
  - (i) OPTCL has not cited any provision of the statute under which Grid Support Charges are leviable but has merely mentioned that it has ‘a logical claim’ to be suitably compensated.
  - (ii) The transmission system of the Petitioner should be so designed that it should take care of fluctuating load of the consumer as it is the duty of the transmission licensee under Section 40 of Electricity Act, 2003. Moreover variation of load of a consumer having CGP is much less than a consumer without CGP.
  - (iii) CGPs absorb some amount of harmonics whereas a consumer without CGP inject full quantum of harmonics generated to the grid.
  - (iv) The unbalanced voltage of the grid is a source of negative phase sequence current which is absorbed by the generators of CGP.
  - (v) Fault level depends upon the generation capacity connected to the grid. Since the CGPs constitute 50% of the generation capacity connected to the grid they are supposed to contribute to the increased fault level of the grid. The parallel operation of CGPs with the grid is highly beneficial otherwise during a fault the grid voltage would have collapsed.
  - (vi) As per Regulation 80 (15) of Supply Code industries having CGPs can draw emergency power upto the capacity of the largest generating unit by paying required tariff. Therefore, it is not a support of the grid as claimed by the Petitioner.
  - (vii) It is wrong to state that active and reactive power demand due to sudden and fluctuating load is not recorded in the meter. Billing is done for all consumers by integration over 15 minutes period and this also applicable for CGPs which does not result in any undue advantage.
  - (viii) Due to injection of power by CGP the load on the transformers in the grid reduces resulting in less transformer loss.
4. The next Respondent NALCO submitted that the CGPs are acting as distributed generator at the load centre for which the transmission and distribution loss has been reduced to a great extent. Further, since all the cost of the transmission utility is being covered by the Commission while approval of Annual Revenue Requirement (ARR) of the utility there is no scope of levying such additional charges on the consumers. On the contrary to the claim of OPTCL that the CGPs which are connected with the grid are getting benefits, NALCO is facing lot of problems due to irregularities of grid operation by OPTCL.
5. Next two Respondents namely M/s. Power Tech Consultant & M/s. Visa Steels Ltd. submitted that OPTCL being the State Transmission Utility (STU) has the responsibility

to maintain the network system of the state as per Sec. 39 & 40 of Electricity Act, 2003. As per Regulation 4.2 of Chapter 4 of Orissa Grid Code (OGC) Regulation, 2006, all the users or prospective users of STU are to be treated equally. Further Section 9 of Electricity Act, 2003 does not differentiate between a CGP & IPP as far as grid connectivity is concerned and hence both should be treated equitably from the view point of grid connectivity and support. Moreover industries owning arc furnaces and rolling mills but without CGP creates much bigger problems and create pollutions in the state grid as compared to an industry having a CGP. The fluctuation in the load, generation of odd harmonics are technical issues which are common for industries with CGPs and without CGPs. M/s. Power Tech. Consultant has also submitted that application of same Grid Support Charges to all CGPs as claimed by OPTCL basing on 7 CGPs is wrong because not only the capacity of each CGP is different but also their contract demand and power export to the grid are different.

6. The Respondent M/s. VAL submitted that as per Section 7 of the Electricity Act, 2003 any generating company may establish operate and maintain a generating station if it complies with the State Grid Code and standards of grid connectivity as referred in Section 73 (b) of the Act. Both Tariff Policy and National Electricity Policy emphasise the unhindered connectivity of CGPs to the grid. M/s. VAL further submitted that Hon'ble High Court of Andhra Pradesh in Vishnu Cement Vrs. Central Power Distribution Company of Andhra Pradesh Limited has declared imposition of Grid Support Charges as violative of Electricity Act, 2003. The Hon'ble High Court has held that such a charge manifests the intent to force the industry to increase the contract demand which is an improper purpose and arbitrary exercise of power. The same judgement is now sub-judice before Hon'ble Supreme Court. Moreover the issue of GSC in state of Gujarat is under sub-judice before the Apex Court of India. The imposition of Grid Support Charges is beyond the jurisdiction of the Commission since the Commission is empowered under Section 86 (1) (a) of the Act to determine tariff for generation, supply, transmission and wheeling of electricity within the State.
7. Another Respondent Shri A. K. Sahani submitted that Section 2 (32) of Electricity Act, 2003 defines Grid means the high voltage back bone system of inter connected transmission lines, substation and generating plants. That implies that CGPs and Generators are parts and partial of the grid system. Therefore, it is not understood how one part of the grid is asking Support Charges to other part. Under such condition of

dynamism all the constituents of the integrated Grid system are mutually benefited as well as become victims of the vagaries created. Thus the very concept of levying Grid support charges to Captive Generating Plant only seems to be absurd.

8. Another Respondent M/s Facor Power Limited submitted that it does not fit into large industrial consumer as it does not utilize power as motive force for industrial production. Further FPL has a standalone captive generating plant supplying power to its group captive consumers using dedicated transmission system. During the course of generation of power in normal condition FPL does not consume any power from Grid rather it supplies power to the Grid. It has only signed power supply agreement with NESCO for start up of 45 MW coal based power plant and to meet essential emergency load during plant shut down period. Therefore, OPTCL cannot levy Grid Support Charges to stand alone CGP like FPL. In the other hand OPTCL is enjoying various advantages of grid support from CGPs by way of utilizing surplus power from CGP in a power deficit situation, receiving VAR support and fault MVA support for the Grid. Further Reg. 4.5 of OGC Regulation, 2006 (Connection agreement-Annexure-1) does not include applicability of Grid Support Charges. Hence the claim of the petitioner should be rejected out rightly.
9. M/s Emami Paper Mills Limited and M/s. CCPPO submitted that Section 11 (1) (e) of Odisha Electricity Reform Act, 1995 deals with charges payable by consumer is also based on the consideration that supply and distribution cannot be maintained unless the charges for electricity supply are reasonably levied and duly collected. This Section does not deal with transmission charges and moreover the CGPs are not consumers of the transmission licensees hence the claim of petitioner is not at all justified.
10. M/s. Naba Bharat Ventures Limited submitted that no provision in the statute empowers the Petitioner to levy Grid Support Charges on the CGPs. They on the other hand as admitted by the petitioner absorb some amount of harmonics. On the contrary consumer without CGPs transmit full quantum of harmonics to the grid. The petitioner is not taking any step to install suitable equipments to filter the harmonics and is injecting those pollutants to the grid for which the CGPs are forced to suffer. The grid voltage is always unbalanced due various categories of consumers and hence is a source of negative phase sequence current which cause stress on the generators of CGP. OPTCL being the STU of Odisha should find some means to prevent the same.

11. M/s Sesa Sterlight Limited submitted that the demand of the Petitioner to levy Grid Support Charges is un-statutory. The Hon'ble Andhra Pradesh High Court in Vishnu Cement Ltd. Vrs. CPDCL and another (CMA Nos. 1104 of 2002) by a judgement dated 02.05.2003 while reviewing the entire issue was 'inter alia' pleased to take note that the State Grid is connected with the Regional and the National Grid. The disturbances in the State Grid are eventually absorbed by the National Grid. But there is no concept of grid support charges to be levied by the CTU. Further, adequate grid security measures/restrictions are provided under the Grid Code to take care of any large scale variation. Therefore, levy of blanket grid support charge on the objectors/respondents is arbitrary and contrary to the Electricity Act, 2003.
12. On the technical report on "Report on Evolution of Parallel Operation Charges" submitted by ERDA (Electrical Research and Development Association ) both M/s Sesa Sterelite and M/s Facor Ltd submitted that the report prepared by the agency concerned is an extended model of Technical report submitted by ERDA to Hon'ble CSERC in December 2008. The study was conducted on 35 numbers of CGPs in Chattisgarh specifying their interconnecting points, installed capacity, Contract Demand, Power Sale contract with CSEB, Average Power Export to Grid. Whereas in the present case OERC has neither fixed any consultant for the purpose nor framed any methodology or calculation for levy of Grid support charges.
13. They further submitted that the report of ERDA exclusively deals with the CGPs of Chattisgarh and neither contain any data related to the CGPs of Odisha nor contain any calculation of Grid Support Charges for particular industry. OPTCL has only submitted the data sheet of 7 large CGPs and accordingly made an average calculation. The capacity of each CGPs are different. It is wrong on the part of OPTCL to levy Grid Support Charges for the CGPs of Odisha based on the technical study exclusively carried for the CGP of Chattisgarh. Hence the petition of OPTCL for lavy of Grid Support Charges without any proper technical study is wrong, premature and liable for rejection.
14. We have also taken on record the submission of other respondents who have filed written objections and have made oral submissions.
15. We heard the parties at length and also perused the technical report submitted by OPTCL. The present installed capacity of the CGPs in the State as submitted by OPTCL is 5173 MW which is more than or equal to the capacity of other generators connected to

Odisha Grid including Odisha share of power from Central Generation Stations. We agree with the contention of CCPPO that the pollutants of the Grid like fluctuations in frequency and voltage, negative phase sequence, distortion due to harmonics etc. are the resultant effect of all synchronous machines like generators and motors of the Grid system. These pollutants are injected into the Grid not only by CGPs but also by other independent generators and machines like motors and arc furnaces of the consumers. Holding industry having CGPs only responsible for that is not correct.

16. After going through the submission of various stake holders of the grid system we conclude that the behaviour of industries having CGPs and also without CGP varies case to case basis. There are ample provisions in the Odisha Grid Code to regulate the behaviour of entities connected to the OPTCL system. Hence, a generic method of calculation of Grid Support Charges for all industries may not be proper. The Petitioner has failed to submit a State-wide study before us basing on which a decision could have been taken. One solution fits all can't be applicable here. So implementation of a model of another State in our State will not be proper.
17. There are enough provisions in Odisha Grid Code, 2006 to maintain qualitative supply in the grid system. Regulation 4.7 of Odisha Grid Code discuss elaborately the ideal behaviour of constituent of the Grid. OPTCL should play the role of watchdog and analyse the pollutant injected by various constituents of the grid system. CGPs and industries injecting pollution should be directed to take up remedial measures like installation of capacitors, filters for harmonics etc. so that grid pollution will be minimised. The non-compliance by any industry or industry having CGP of the Grid Code should be dealt as per Regulation 1.18 of OGC, 2006. Therefore, the prayer of OPTCL for levy of Grid Support Charges is not acceptable.
18. Accordingly, the case is disposed of.

**Sd/-**

**(S. P. Swain)**  
**Member**

**Sd/-**

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

**Sd/-**

**(S. P. Nanda)**  
**Chairperson**