

**ODISHA ELECTRICITY REGULATORY COMMISSION  
BIDYUT NIYAMAK BHAWAN  
PLOT NO.-4, CHUNUKOLI, SHAILASHREE VIHAR  
BHUBANESWAR - 751 021**

\*\*\*\*\*

**Present:**      **Shri U. N. Behera, Chairperson**  
                  **Shri A. K. Das, Member**  
                  **Shri S. K. Parhi, Member**

**Case No. 50/2017**

<b>OPTCL</b>	.....	<b>Petitioner</b>
<b>Vrs.</b>		
<b>CEO, CESU &amp; Others</b>	.....	<b>Respondents</b>

**In the matter of:**      **An application under Regulation 4 (5) (i) of OERC (Determination of Open Access Charges) Regulations, 2006 and non-compliance with the directions of OERC in Case No. 64/2016 for determination of Reactive Energy Charges for FY 2016-17 and 2017-18 .**

**For Petitioner:**      Shri Biswaranjan Mishra, GM (Elect.), OPTCL

**For Respondents:**      Shri P. K. Padhy, G.M (Elect.), CESU, Shri S. P. Mallick, Sr. GM (Elect.), NESCO Utility, Shri K. C. Nanda, DGM (F), WESCO Utility, Shri H. R. Das, DGM. M/s. IMFA, Shri M. K. Rajguru, Advocate on behalf of M/s. NALCO, and Shri S. K. Pattanayak, SLDC. Nobody is present on behalf of SOUTHCO Utility

**ORDER**

**Date of hearing: 27.11.2018**

**Date of order: 05.02.2019**

The petitioner-OPTCL vide its application dated 02.08.2017 has proposed the approval of the reactive energy charges @ 3p/KVArH to be levied on Long Term Open Access(LTOA) customers like four DISCOMs, IMFA, NALCO and other open access customers. While praying for the same, OPTCL has cited the following.

2. The Commission in its order dt.23.03.2015 had approved 6.50 paise/KVArH reactive energy charges provisionally for the year 2015-16 in line with the provisions of OGC. The Commission had simultaneously directed OPTCL to discuss the matter in the GCC and file detailed procedure /billing of reactive energy charges with full justification. The same rate of reactive energy charges was provisionally continued for the year 2016-17. The matter was discussed in the 13<sup>th</sup> GCC meeting dt.25.05.2016. The Commission had also directed OPTCL to file application for determination of reactive energy charges for 2016-17 and 2017-18.
3. OPTCL now submit that they have provided 275MVA reactive compensation in 20 number of sub-station and has incurred expenditure of Rs.8.9224 cr. Accordingly,

OPTCL has calculated that the reactive energy charge works out to 2.77 paise/KVArH i.e. 3paise/KVArH. Accordingly, OPTCL has filed this application for approval of reactive energy charges @ 3 p/KVARH.

4. NALCO while filing its rejoinder on 29.05.2018 has submitted that the reactive energy charges should be properly calculated and both incentive and penalty for VAR transaction should be equally applicable to all LTOA customers including NALCO and IMFA.
5. NESCO Utility vide their rejoinder dated 02.06.2018 has requested for adoption of KVAH billing for all three phase consumers above 20 KW or incorporate some provision in tariff order before making reactive pricing mechanism effective.
6. WESCO Utility, SOUTHCO Utility and CESU vide their rejoinder dated 11.06.2018, 18.06.2018 and 25.06.2018 respectively have prayed for rejection of the above application of OPTCL.
7. The Commission vide interim order dt.13.06.2018 had directed for conducting of workshop/mock exercise and furnish the details of such exercise of PRDC, a consultant, on the methodology adopted for calculation of reactive energy charges. The Commission had also directed the DISCOM and stakeholders to give their feedback to OPTCL as well as to the Commission by 08.07.2018. Thereafter, OPTCL was directed to file rejoinder to the Commission by 15.07.2018.
8. SLDC vide rejoinder dt.16.07.2018 submitted that the mock exercise/workshop has already been conducted wherein the DISCOMs did not agree to pay reactive energy charges as they are not responsible for drawl of reactive power. SLDC suggested that the LTOA customers should procure M-cubed software for cross checking of the data.
9. OPTCL vide rejoinder dated 19.07.2018 submitted that reactive energy charges is not a revenue earning tool for OPTCL. It shall be shared among the stakeholders and reactive energy charges mechanism is only a grid discipline measure.
10. The Commission vide interim order dt.05.10.2018 directed that the mock exercise/workshop may be continued and the PRDC report may be circulated among the stakeholders. The stakeholders may be explained in detail about the gain/loss /net zero sum method of the reactive energy pricing.
11. SLDC vide rejoinder dated 26.11.2018 submitted that all stakeholders have been explained in the workshop about all aspects including the PRDC report in compliance

to the Commission's order. All utilities have agreed to the procedure adopted by SLDC.

12. The Commission vide interim order dated 27.11.2018 directed OPTCL to conduct a meeting once again on the unresolved issues among the parties in presence of Director (RA), OERC within 15 days and submit the minutes of the joint meeting within seven days thereafter.
13. In compliance to the direction of the Commission, a discussion was held on 18.12.2018 in presence of the Director (RA), OERC. The following points emerged in the discussion:
  - The main objective of reactive power pricing is to instill grid discipline but not to impose penalty. Participating in the discussion, the representatives of DISCOMs have expressed that they are not having any mechanism to control VAr injection/ drawal at different interconnection points. But as per Odisha Grid Code Regulations, 2015, the beneficiaries are expected to provide local VAr compensation/generation such that they do not draw VARs from EHV grid, particularly under low voltage condition. Therefore, DISCOMs may approach the Commission separately with relevant techno-commercial study for return on their investment, if any, on this account.
  - OPTCL is advised to furnish a statement on pay-in and pay-out (4 months before and after installation of capacitor banks) of each DISCOM for their reference. DISCOMs need to curtail their VAr drawal/injection for the safety of grid and/or the equipments for reliable power system operation.
  - OPTCL has installed capacitor banks of total 275 MVar capacity in different grid s/s and the voltage level is more or less within the allowable range, there is no further scope for installation of capacitor bank by OPTCL. However, OPTCL agreed to install additional capacitor bank of appropriate capacity at different interconnection points at 33 kV, if required, in future to maintain the 33 kV voltage within the allowable limit. Therefore, DISCOMs are required to install capacitor banks at load ends for reactive support in order to restrict reactive power drawl in low voltage condition. For this purpose, DISCOM, as a first step may select some sample feeders, install the capacitor banks and study its effect on the system.

- OPTCL/DISCOMs may refer various research papers available in this regard and study the pricing, practices being followed in different States. It was proposed that, a team may be constituted with the representatives from OPTCL/DISCOMs for a detailed study including field visit (if required) on reactive power management/pricing in force in different neighboring States. The report of the Committee in this regard should be furnished for consideration by the Commission.
  - The investment approved for installation of 275 MVAR capacitor banks has already been considered by the Commission in the ARR of OPTCL. Further, at this stage, no justifiable cost recovery calculation has been submitted by OPTCL for determination of reactive energy pricing. Hence, OPTCL requested that 3 paise/ KVARh may be continued provisionally as reactive energy charges so that the stakeholders would be compelled to maintain grid discipline.
14. In line with the above, OPTCL has now submitted its rejoinder on 07.01.2019 wherein OPTCL has enclosed the minutes of the above meeting dated 18.12.2018. OPTCL submits that the DISCOMs are still not agreeable to pay reactive energy charges as they are not in a position to ascertain the VAR drawl /injection by the CGPs and also they do not have KVAH billing facility. OPTCL now has prayed for approval of the reactive energy charges of 3 paise /KVARh.
15. Heard the parties concerned at length. The genesis of this case goes back to Case No. 22 of 2009 where the Commission directed M/s OPTCL, among other issues, to bring up proposals for necessary reactive energy charges in accordance with Grid Code and also proposal for installation of shunt capacitors in 23 substations where the voltage profile were not within the limits as per Annexure-A enclosed to the said order. The Commission in the ARR for the year 2009-10 approved the reactive energy charges provisionally @ 5.75 paise/KVARh as per OGC. Accordingly, OPTCL in its ARR for the year 2010-11 in Case No.145 of 2009 brought the proposal of reactive energy charges and Commission approved 6 paise/ KVARh for the year 2010-11 and subsequently 6.25 paise/KVARh for the year 2011-12, 6.50 paise/KVARh for the year 2012-13, 6.50 paise/KVARh for the year 2013-14, 6.50 paise/KVARh for the year 2014-15, 6.50 paise/KVARh for the year 2015-16, 6.50 paise/KVARh for the year 2016-17, 6.50 paise/KVARh for the year 2017-18 and 3 paise/KVARh for the year 2018-19. In addition, the Commission approved installation of reactors as proposed by

OPTCL under separate investment plans. While approving the reactive energy charges provisionally, the Commission had directed OPTCL to submit full justification for its calculation in consultation with the stakeholders, for installation of latest software for transactions, capacity building of users and installation of appropriate meters. The Commission also directs OPTCL to obtain and submit the opinion of the stakeholders and quantified substantive data to confirm the above provisional charges.

16. As observed from para 13 above, the necessary conditions required for confirmation of the above reactive charges has not yet been achieved and placed before us by the petitioner. Therefore, the Commission is of the view that the provisional reactive energy charges of 3 paise/KVArH as allowed in ARR 2018-19 order continue for time being till a final justification is submitted by OPTCL in consultation with the stakeholders. OPTCL is further directed to constitute a committee with representative from OPTCL, DISCOMs, SLDC and other stakeholders and furnish a report covering all the parameters and progress for final determination of charges within six months. Meanwhile, M/s. OPTCL shall pursue appropriate metering and software implementation for all the substations and inter-connection points under its control for proper accounting of reactive energy.
17. With these directions the case is disposed of.

Sd/-  
**(S. K. Parhi)**  
Member

Sd/-  
**(A.K. Das)**  
Member

Sd/-  
**(U. N. Behera)**  
Chairperson