

MADHYA PRADESH ELECTRICITY REGULATORY COMMISSION
BHOPAL

Sub: In the matter of petition under section 86 of the Electricity Act, 2003 read with Madhya Pradesh Electricity Regulatory Commission (Conduct of Business) (Revision-I) Regulations, 2016 to adjudicate the dispute with respect to applying correct power factor while raising their Bill for Grid Support/Parallel Operation Charges by MPPTCL.

ORDER

(Hearing through Video Conferencing)

(Date of Order: 05th July' 2022)

M/s. RCCPL Pvt. Ltd (Unit: Solar CPP)

Village Bharauli, Post- Itahara,

Tehsil-Maihar, Satna (MP) – 485 773

- **Petitioner**

Vs

(1) The Managing Director

MP Power Transmission Co. Ltd. (MPPTCL)

Block No.2, Shakti Bhawan, Rampur, Jabalpur – 482008.

- **Respondents**

(2) The Managing DirectorA

M.P. Poorv Kshetra Vidyut Vitran Co. Ltd.

Shakti Bhawan, Rampur, Jabalpur (MP) – 482 008

Shri Ajay Gupta, Advocate appeared on behalf of the petitioner.

Shri Vincent D'Souza, SE appeared on behalf of Respondent No. 1.

The petitioner, M/s. RCCPL Pvt. Ltd. has filed the subject petition under Section 86 of the Electricity Act, 2003 read with Madhya Pradesh Electricity Regulatory Commission (Conduct of Business) (Revision-I) Regulations, 2016 to adjudicate the dispute with respect to application of correct power factor while raising their Bill for Grid Support/Parallel Operation Charges by MPPTCL.

2. The petitioner has broadly submitted the following in subject petition:

"1. The Petitioner (M/s. RCCPL Pvt. Ltd. Unit: Solar CPP) deals in diversified business and inter alia specializes in manufacturing of cement in India. The present dispute is in relation to the cement plant situated at Tehsil Maihar, District Satna, MP.

The Petitioner is challenging the inaction on the part of Respondent No. 1 i.e. Madhya Pradesh Power Transmission Company Limited (MPPTCL) which has failed to consider genuine grievance of Petitioner with respect to applying correct power factor while raising their Bills for Grid Support/ Parallel Operation Charges. The petitioner has incurred financial losses amounting to Approximately Rs. 8,96,000/- (Rupees Eight Lacs Ninety-Six Thousand only)

due to incorrect application of Power factor (P.F) as P.F 0.8 instead of P.F>0.999 rounded off as P.F1 in case of Captive Solar PV Power Plant (Solar CPP).

- 2. It is apposite to mention that power factor calculated for thermal power plants per se cannot be applied for Captive Solar PV power plants since technically there is only conversion of solar energy into electricity into DC and the same is then converted to AC through an inverter therefore, standard power factor is **Unity (P.F. 1)** in such case. For the purposes of electricity consumption in the plant, the Company generates electricity through Captive Solar PV Power Plant of 7.7 MW (AC). Apart from the Solar Plant, Company also generates electricity by 12.25 MW Cement Waste Heat Recovery System (WHRS), however the petitioner does not dispute the power factor PF 0.80 for its Waste Heat Recovery System.*
- 3. The present unit of Solar CPP of capacity 7.7 MW (AC) at Maihar was commissioned in the year 2019 and an agreement for synchronization of aforesaid plant with MP Grid was executed on 22.11.2019 with Respondent No. 2 (MPPKVVCL). This agreement is silent on the issue of calculation of power factor.*
- 4. That power factor P.F 1 (>0.999) for Solar Captive Power Plant is scientifically approved in diverse temperature range which covers all types of Indian weather conditions and is also mentioned in the Inverter specifications from the manufacturers. The inverter is used to convert Direct Current (DC) generated from Solar light into Alternate Current (AC). The details regarding specifications of inverter is mentioned in the name/ information plate of every inverter unit.*
- 5. The calculation of bill towards Grid Support/ Parallel Operation Charges by Respondent No. 1 is based on power factor P.F 0.80 as per order in Suo Motu Petition 73/2012 passed by this Commission (MPERC) vide order dated 31.12.2012 wherein Commission determined Parallel operation charges to be levied at Rs. 20/- per KVA per month on the capacity of CPP (after deducting load pertaining to auxiliary consumption) connected to the Grid. It is pertinent to mention here that the Petitioner though does not agree with the present Parallel operation charges but at the moment is not challenging the present Parallel operation charges to be levied at Rs. 20/- per KVA per month but only challenges the applying of wrong power factor PF i.e. 0.80 to arrive at KVA from KW which is applied for calculating the Parallel operation charges levied on the Petitioner (Unit: Solar CPP).*
- 6. Petitioner has submitted various representations to Respondent No. 1 for redressal of their grievance and to apply correct power factor P.F 1 instead of P.F 0.80 but all in vain. The representations remained unanswered till date except one reply by Respondent No. 1 vide a letter dated 22.01.2020.*

7. *Respondent No. 1 in their letter dated 22.01.2020 has given a vague reply asking Petitioner to produce manufacturer certificate for maximum generation capacity of captive solar PV (Photovoltaic) Power Plant that can be handled by the inverter installed at premises of Petitioner company at any condition."*
3. With the aforesaid submission, the petitioner has prayed the following:
- (i) *Declare that correct power factor for Solar powered electricity generation unit is $PF > 0.999$ or P.F. 1*
 - (ii) *Declare that the power factor as calculated for the purpose of generating bill towards Grid Support/ Parallel Operation Charges in case of Solar Captive Power Plant shall be PF 1 for all purposes;*
 - (iii) *Direct Respondent No. 1 to refund the excess amount of Rs. 8,96,000/- along with prevalent bank interest to petitioner which has been wrongly received by Respondent No. 1 over a period of time.*
4. At the hearing held on 15th March' 2022, Ld. Counsel who appeared for the petitioner explained the genesis of the petition. In view of the issue involved in this petition, the Commission noted that Respondents also be heard before admitting the petition. Therefore, petitioner was directed to serve a copy of subject petition to the Respondents within a week. The Respondents were directed to file their replies to the subject petition within two weeks, thereafter. The Respondents were also directed that a copy of their replies be served to the petitioner simultaneously. The case was re-scheduled for motion hearing on 26th April' 2022 to decide maintainability of subject petition after hearing the Respondents.
5. At the hearing held on 26th April' 2022, it was observed that Respondent No. 1 filed reply to the subject petition on the 22nd April' 2022, however, Ld. Counsel for the petitioner stated that he did not receive copy of the aforesaid reply. Therefore, Respondent No. 1 was directed to serve copy of its reply to the petitioner within two days without fail. The case was again re-scheduled on 7th June' 2022 for motion hearing on maintainability of the subject petition.
6. Petitioner filed rejoinder on the 13th June, 2022. Both the parties were heard on maintainability of the subject petition at the hearing held on 14th June' 2022 and the case was reserved for order.
7. Respondent No. 1, M.P. Power Transmission Co. Ltd. submitted the following in its reply to this petition:
- 1. *That, the petitioner seeks declaration of power factor > 0.999 or PF-1 for their solar captive plant installed at their premises of capacity 7.7 MW (3 x 2.5 MW at 11 KV and 4 x 50 KW at 415V AC).*
 - 2. *That, the plant was synchronized and connected in parallel with the grid on 22.11.2019 and the agreement to this effect was signed between the petitioner and MPPKVCL, Jabalpur on dated 22.11.2019.*

3. *That, considering the power factor as 0.8, the net MVA capacity after deducting the auxiliary consumption from the plant capacity was worked out as 9.6010 MVA and considering the same for levy of Parallel Operation Charges, the first Invoice for Parallel Operation Charges @ Rs. 20/- per KVA per month was issued to the petitioner M/s. RCCPL Pvt. Ltd.*
4. *That, the respondent MPPTCL sought certain technical details from petitioner M/s. RCCPL Pvt. Ltd. vide letter no. 160 dated 22.01.2020 and No. 622 dated 05.05.2020 to ascertain the power factor. The information sought was regarding submission of manufacturers certification for maximum generation capacity in MVA for 7.7 MW captive Solar PV Power Plant that can be handled by the installed inverters.*
5. *That, the details furnished by the petitioner RCCPL were found inadequate to ascertain the power factor, the submission of manufacturers certification for maximum generation capacity as earlier requested vide MPPTCL letter No. 622 dated 05.05.2020 was emphasized, which have not been submitted so far by the petitioner M/s. RCCPL Pvt. Ltd.*
6. *That, the contents of the Petition No. 73 of 2021 for considering the power factor at >0.999 are not acceptable. This is further submitted that the power factor is considered based on the inverter's capability curves (PQ curve) in respect of Solar Captive Power Plants connected with the grid or on the basis of certification by the manufacturer.*
7. *That, the issue regarding levy of Parallel Operation Charges on the Captive Power Plants connected with the grid is presently under adjudication before the Hon'ble Supreme Court by way of Civil Appeals filed by M/s. Hindalco Industries Ltd., Ultra Tech Cement Ltd., HEG Ltd. & Indian Captive Power Producers Association who have filed those appeal against the Judgment dated 02.07.2021 of Hon'ble APTEL, New Delhi whereby the validity of order dated 31.12.2012 of Hon'ble MPERC regarding levy of Parallel Operation Charges on the Captive Power Plants connected with the grid has been upheld.*
8. *That, the aforesaid Civil Appeals of the Captive Power Plant Companies are under active consideration by the Hon'ble Supreme Court and may come-up for final arguments shortly.*
9. *That, pending litigation before the Hon'ble Supreme Court whereby the imposition of Parallel Operation Charges itself have been challenged, it may be lawful not to admit the petition for the present filed by petitioner M/s. RCCPL Pvt. Ltd.*
10. *That, the issue in question regarding power factor as sought to be adjudicated by the petitioner M/s. RCCPL Pvt. Ltd. could be taken up for further consideration upon Judgment of the Hon'ble Supreme Court in the pending Civil Appeal filed by the Captive Power Plant owner companies."*

8. By affidavit dated 13.06.2022 petitioner submitted following in its rejoinder to the reply filed by the Respondent MPPTCL:

- “1. *Petitioner has raised this point that MPPTCL has unilaterally and ex. parte has decided and considered the Power Factor as 0.8 for the net MVA capacity. Petitioner's grievance is on the Power Factor only that MPPTCL was required to consider the Power Factor as >0.999 insisted of 0.8. Our stand point of considering >0.999 as the Power Factor is based on the unity Power Factor provided by the Manufacturer which is correct while the PF that is 0.8 considered by MPPTCL is based on their own imagination as the said Power Factor is applicable to other than Solar PV Power Generation system / mode. Further MPPTCL has mentioned in the reply that considering Power Factor 0.8 & thus work out net MVA 9.6010 MVA and therefore they have considered the same for levy of Parallel Operation Charges. It is pertinent to mention here that petitioner's challenge is not for the levying of Parallel Operation Charges in the instant application while our grievances is considering the Power Factor as >0.999 instead of 0.8 as considered by MPPTCL ignoring the manufacturer guidelines. Manufacturer guidelines are based on their various experiments / testing regarding producing power by Solar PV Inverter as there is no intervention for loss of power as if happens in the other mode of power generation. Currently, Petitioner agree to the levy of Parallel Operation Charges @ Rs. 20/- per kVA per month unless Petitioner challenges the same before this Hon'ble forum by way of a separate application. In short in the instant petition petitioner has challenged only the application of applying Power Factor and not the Parallel Operation Charges.*

2. *The Respondent Company MPPTCL has already placed on records the subject letter no. 160 & 622 before the Hon'ble forum while our reply (vide our letters dated 06.02.2020) to their said letters were not placed on records by the respondent. Petitioner therefore place on records their reply to the aforesaid letter no. 160 dated 21.01.2020 before this Hon'ble forum. Petitioner has replied with the supported documents as has been rated by the manufacturer which are correct in so far as Power Factor is concerned. While respondent is asking about the Power Factor rating **at Any Condition**. Petitioner reiterates that every machinery being manufactured by manufacturer after having met various test parameters and having obtained necessary approvals from the concerned approving rating authorities before it comes to the market for its actual usage in the market. For example, if a Car manufacturer provides specific mileage for a particular car it means that the mileage specified and approved by manufacturer will be applicable only when the approved rating parameters are met according to the ratings. For example, if manufacturer says that the car will provide 20 Km average per litre mileage at the speed of 60 Km per hour. Then car will give the desired average/mileage However, if someone drives the car either at the speed of 120 Km per hour or 10 Km per hour than in both the conditions manufacturer guidelines are not followed and therefore desired mileage cannot be achieved that is at the rate of 20 Km average per litre. Similarly, respondent has asked in their aforementioned letter asking us to assure them maximum generation capacity **at Any***

Condition. We therefore have provided the certificates and machinery / Inverter details as manufacture's claims and we are not an authority to go against manufacturer. It is to clarify that the same have already been provided to the respondent through our reply. Copy of the reply dated 06.02.2020 is annexed herewith and marked as **ANNEXURE P-11**.

3. The details provided by the Petitioner, as provided by the manufacturer were found inadequate unilaterally by the respondent. Respondent herein asking such a thing in this para which is not feasible to provide by the manufacturer as the manufacturer has already provided test certificates. In this behalf, again we are submitting herewith for the kind perusal of this Hon'ble forum. Page-39 of the Manual under table 15c provides Inverter Specifications, Operating ambient temperature range (-) 20 degree Celsius to (+) 50 degree Celsius. Thus, if the temperature is maintained under these parameters, the applicable Power Factor will be >0.999 . It can be stated with full responsibility that Power Factor for Solar Captive power Plant is unity at any condition prevalent at Maihar District Satna (M.P) where the plant is located.
4. Respondent herein has already judged and decided that the Power Factor >0.999 is not acceptable insisted of proving their statement as to why PF >0.999 is not applicable. Also, the Respondent has misled this forum about the PQ curve. Copy of the PQ curve diagram is annexed herewith and marked as **ANNEXURE P-12**.
5. Respondent has given the reference of the Civil appeals pending with Hon'ble Supreme Court. This is to mention here that the Writ appeals are pending before the Hon'ble Supreme Court with regard to Parallel Operation Charges and not for the Power Factor. Our challenge before this Hon'ble forum is about the applicability of the Power Factor and not the Parallel Operation Charges. Hence giving reference of these writ appeals pending in Hon'ble Supreme Court does not act as an embargo in deciding the present petition.
6. Again to state & clarify that civil appeals before the Hon'ble Supreme Court are on the issue of Parallel Operation Charges. Hence present matter not on the issue of Parallel Operation Charges can very well be heard by the Hon'ble Commission.
7. Again it is reiterated that Respondent is misleading this Hon'ble forum by giving reference of writ appeals before Hon'ble Supreme Court which infact are on the subject matter of Parallel Operation Charges and not on the issue of Power Factor.
8. In view of the matters pending before the Hon'ble Supreme Court for the adjudication of Parallel Operation Charges and therefore present petition only challenges the wrong Power Factor being applied by the Respondent and hence there is no necessity for this Hon'ble Forum to wait for the decision of the Hon'ble Supreme Court in the matter of Parallel Operation Charges as under the present petition, Petitioner has not challenged the Parallel

Operation Charges.

9. *In view of the submissions made above herein, petitioner respectfully prays that pendency of matters before Supreme Court creates no impediment for this Hon'ble Forum and the Hon'ble Commission can very well proceed with the hearing of present petition on merits as matters pending with Hon'ble Supreme Court are on Parallel Operation Charges and not on the applicable Power Factor. The Test Certificates, Inverter Specifications, Name Plate Details engraved on the Inverter and other supporting documents clearly indicates that in the Solar PV Power generation the Power Factor to arrive at the net MVA should be >0.999 and not the 0.8. Petitioner has sanguine hopes that Hon'ble Commission will consider the merit of the case and will decide the application in favor of Petitioner as all the documents provided by Petitioner supports the claim of Petitioner."*

Commission's Observations and Findings:

9. The present petition has been filed for adjudication of dispute with regard to application of power factor by the Respondent No. 1 while raising bills to the petitioner for Grid Support/ Parallel Operation Charges. As per petitioner, the Respondent has incorrectly considered the power factor of its captive solar power PV plant as 0.8 instead of unity power factor.

10. The Respondent No. 1 (MPPTCL) after considering the power factor as 0.8 and after deducting the auxiliary consumption, has worked out the net capacity of plant as 9.6010 MVA and based on this capacity, the Respondent has levied Parallel Operation Charges @ Rs. 20/- per KVA per month to the petitioner as per Commission's order dated 31st December' 2012 in SMP No. 73 of 2012. The petitioner has not challenged the aforesaid Commission's order in the subject petition.

11. The Respondent No. 1 had sought certain technical details from petitioner regarding manufacturer's certification for maximum generation capacity in MVA for 7.7 MW captive Solar PV Power Plant to ascertain the power factor. However, the details furnished by the petitioner were not found sufficient by Respondent No. 1 to ascertain the contention of petitioner with regard to power factor.

12. The Respondent No. 1 has again stated that applicability of unity power factor can only be considered if the petitioner is able to submit such documents to the satisfaction of Respondent No. 1. Having heard both parties on the 14th June' 2022, the Commission has noted that the documents/certificates which have been shared by petitioner with Respondent No. 1 in support of its claim regarding power factor are not technically adequate to consider unity power factor by Respondent No. 1 for the purpose of levying Parallel Operation Charges on the petitioner's solar power plant. In such a situation and to ascertain the correct power factor of petitioner's solar power plant in this matter, the parties were asked to carry out a study by an independent expert agency in this regard. Both parties have shown their agreement for aforesaid study to ascertain the correct power factor of petitioner's power plant.

13. In view of the above, petitioner and Respondent No. 1 are directed to jointly appoint an expert agency to carry out study to ascertain correct power factor in this matter. The expenses towards this study shall be shared equally by the petitioner and Respondent No. 1. This study be carried out expeditiously and preferably within a period of three months. The outcome of aforesaid study shall be binding on all parties in this matter and billing shall be revised accordingly, if required. Till the outcome of the study, billing for Grid support/parallel operation charges shall be continued as per same power factor which is being considered by Respondent No. 1.

With the above observations and directions, the subject petition is disposed of.

(Gopal Srivastava)
Member (Law)

(Mukul Dhariwal)
Member

(S.P.S. Parihar)
Chairman