

**GUJARAT ELECTRICITY REGULATORY COMMISSION  
BEFORE THE ELECTRICITY OMBUDSMAN, GUJARAT STATE  
Polytechnic Compound, Barrack No.3, Ambawadi,  
Ahmedabad-380015**

**CASE NO.57/2018**

**Appellant:** M/s. M. V. Steel  
13, SBS Colony, Kalanala  
Bhavnagar-364002

**Represented by:** Shri Tejas J. Shah, Manager  
Shri Mahesh Raval, Manager

**V/s.**

**Respondent:** Executive Engineer,  
Paschim Gujarat Vij Company Limited  
Rural Division Office, Bhavnagar-364001

**Represented by:** Shri N.K.Chudasama, EE,PGVCL, Bhavnagar(R) D.O.  
Shri Y.B.Baraiya, DE, PGVCL, Bhavnagar(R) D.O.

**:::PROCEEDINGS:::**

- 1.0.** The Appellant had submitted representation aggrieving with the order No.2339 dated 29.05.2018 passed by the Consumer Grievances Redressal Forum, Paschim Gujarat Vij Company Limited, Bhavnagar, in case No. 144/2017-18. The representation was registered at this office as Case No.57/2018. The hearing of this case was kept on 26.07.2018.
- 2.0.** Appellant has represented the case as under.
  - 2.1.** Appellant is a proprietary firm, manufacturer of MS and metal scrap by melting process. Considering the severe recession in the market, Appellant had opted HTP-IV tariff for consumer No. HT-23712. The bill for the month of September,2017 was issued under HTP-IV tariff but the energy units are charged with rate equivalent to HTP-I tariff.
  - 2.2.** Against the subjected energy bill Appellant had filed grievance before CGRF, but the plea was rejected by CGRF. Appellant had paid all the

bills under question with protest, and there is no any outstanding amount. Appellant has requested to refund the bill amount paid by him.

- 2.3. It is submitted that power is used for making ingots from metal scrap by melting process. Appellant has opted HTP-IV tariff and used power from 10.00 p.m. to 06.00 a.m. next day for manufacturing. Appellant has referred the tariff conditions of HTP-IV category and has stated that energy bill for the month of September,2017 was received under HTP-IV tariff, but energy charges in the bill are calculated as per HTP-I tariff, resulting in loss of Rs. 14.87 lakhs.
- 2.4. Appellant has submitted various grounds for appeal as under.
  - (1) As per option HTP-IV tariff Appellant can use 10% of total energy consumed during billing period beyond prescribed hours. In the month of september,2017, Appellant has consumed total energy 6,60,850 units, out of which 5,94,350 units are consumed during night hours while 66,500 units are used in remaining hours. Therefore, 415 units are used more than the limit specified in the tariff. Hence Respondent has issued energy bill with energy rate equivalent to HTP-I tariff. The basic energy rate is increased from Rs. 2.25 per unit to Rs. 4.30 per unit, resulting in additional bill of approximately Rs. 14.87 lakhs.
  - (2) HTP-IV tariff comes into existence due to more availability of power during night hours compared to day time. To support the energy guzzling industry without additional transmission capacity and to run generator at optimum efficiency, the tariff HTP-IV is introduced.
  - (3) The conditions are introduced in the tariff with a view that the consumer must not take undue advantage of the tariff by continuous production during day time. The main purpose of tariff is for production during the night hours only. Therefore, limit of 15% on contract demand and 10% on total units

consumed during billing cycle is imposed on power used during the day time.

- (4) The units consumed during the night hours for production is quite less due to “Jain paryushan festival” than the normal units during the year. Therefore, night consumption is reduced but accordingly day consumption is not reduced, resulting in more percentage than stipulated units.
- (5) The increased units consumption during day time is less than 0.1% as per stipulated units of 10%. Energy consumption is increased but at the same time demand has not crossed to stipulated limit. This shows that Appellant has not taken any production during the day time as industry of Appellant is single process industry with 4000 KVA furnace. It is stated that it is not possible to take production without full load as the scrap will not melt at reduced load. Hence it is confirmed that Appellant has not taken any production during the day time.
- (6) It is submitted that as per the universal law and as per appellant’s understanding there are broadly following major parameters which define the inaccuracy of energy measurement system.
  - (A) Fluctuation of reading value, represented in percentage from the actual value (which can be a reading error) like if the same meter is tested for 10 times reading value will not be same for all time.
  - (B) A fixed error means deviation in results at operating level as compared with results obtained at standards conditions and standard parameters, by considering ‘zero’ influence of all parameters at full scale.
  - (C) For power and energy measurement the phase shift between the voltage and current also affect the accuracy. Since the power  $(P) = \text{voltage (V)} \times \text{current(I)} \times \text{cosine of the}$

phase angle. This angle accuracy is represented as degrees in current transformer.

The accuracy of energy measurement system is the summary of all its components. A typical measuring system has a power meter and current transformer(CT). Similar to power meter, as per IS standards the CT also has an accuracy classes.

Under full load conditions the standards inaccuracy of energy measurement system is having

Typical meter inaccuracy: 0.5%

Typical CT inaccuracy: 0.5%

Typical system total inaccuracy at full load: 1.0%

This inaccuracy will increase under lower load conditions which can be described as under:

As per definition the ratio error is 0.5% of rated current.

The rated current of CT is 250/5 Amp.

So the error allowed for 0.5 classes CT with 250 Amp. Is 1.25A (250\*0.5/100).

The connection of Appellant is of 4000 KVA

$$KVA = \sqrt{3} * voltage * current$$

$$4000KVA = 1.73*11*A$$

$$A = 4000/1.73*11 = 210A : \text{ Say } 200 \text{ Amp.}$$

In day time KWH should be restricted to 10% of full load.

Considering constant voltage during day and night, the allowable AMP is nearly 20 AMP. As per above definition total variation allow is 1.25 AMP in 250/5 AMP CT. But as this stage the allowable current is only 20 AMP. Therefore, 1.25 AMP variation is allowed in total 20 Ampere load.

$$\%wise \ 1.25 / 20 * 100 = 6.25\%.$$

So as per definition the ampere recorded in day time is having 6.25% variation. Units recorded in meter is directly

proportionate to current as voltage and PF is normally constant ( $W = V \times I \times PF$ ).

If Appellant apply the formula for total consumption then the difference (increase) in unit consumed is less than allowable error.

The following table will illustrate the error recorded by meter only.

Day time reading (% of total measurement)	Inaccuracy rating of meter % @100% load.	% range of actual measurement @100% load.	Inaccuracy rating of meter % @10% load in day time.	% range of actual measurement @10% load in day time
9.5	0.5	9.00 to 10.00	6.25	3.25 to 15.75
9.6	0.5	9.01 to 10.01	6.25	3.35 to 15.85
9.7	0.5	9.02 to 10.02	6.25	3.45 to 15.95

In the instant case the measurement of units by meter is exceed to 0.06% of specified allowable limit of measurement during day time. The above table clearly shows that any decrease in load will directly increase the inaccuracy of measurement by meter.

The day time measurement in unit is only 0.06% higher of allowable total unit measurement but the inaccuracy of measurement is very high at that load.

- (7) It is submitted that in case of violation in load demand in a large load curve of particular sub-station is disturbed this is against the grid discipline. While energy violation is not affecting respondent's system in any way. Therefore, the penalty is too high.
- (8) Forum has failed to appreciate that the submission given by Executive Engineer, for meter accuracy is based on guidelines defined by Regulatory Committee for manufacturer of meter as per IS 14697:1999, which describes whether the meter is manufactured as per laid down parameters and laid down limits

or not? The variation during operation has to be taken into account.

- (9) Appellant has referred Case No.31 of 2007, in which Electricity Ombudsman has clearly opined that the penalty amount is against the rule of equity and natural justice. The Respondent should be asked to explain the loss occurred due to violation of this condition of energy limit. The laws are made for discipline but justice should be given based on the gravity of the situation. It is submitted that when steel industry is fighting to survive, this type of penalty should not be imposed.

Appellant has referred the order issued by Hon'ble High Court in SCA No. 95/2008 in which it is clearly opined that for minor lapse in condition, reasonable penalty should be imposed.

- (10) It is stated that in case of violation of energy consumption condition the entire consumption should be billed as per HTP-I tariff. There is a provision for night rebate in HTP-I tariff. A rebate 40 paise per unit is granted for unit consumed during night hours. In the subjected bill energy is charged at HTP-I tariff but refund is not granted. The said matter was put up before CGRF but same was not considered. This is an error on face of the record of CGRF.

2.5. Appellant has prayed as under.

- (1) The bill for the month of September,2017 should be revised with energy charges as per HTP-IV tariff considering the error in measurement of reading by metering system.
- (2) Allowing the benefit of doubt in the favour of consumer for justice.
- (3) Law of equity and natural law of justice should be applied considering the loss to Respondent PGVCL and amount of penalty imposed on Appellant.

**3.0.** Respondent has represented the case as under.

3.1. As mentioned in Para No. 2.1, Appellant is a HT consumer of Respondent, bearing consumer No. HT-23712, having HTP-IV tariff.

3.2. HT bill for September,2017 was prepared on the basis of final reading of 16.09.2017, 00.00 hours. As per tariff category conditions, Appellant had violated the HTP-IV tariff conditions i.e. day consumption units have exceeded the allowable 10% limit. Hence energy charges are taken as per HTP-I tariff.

3.3. The energy bill for September,2017 was prepared as under:

Particulars	Date and Time.	Total KWH.	Night KWH
Final reading	16.09.2017 00:00	307250	277750
Initial reading	16.08.2017 00:00	294033	265863
Difference		13217	11887
MF		50	50
Total units		660850	594350
Day consumption		Total KWH-Night KWH=66500	
%of day consumption		10.06279791	

3.4. Respondent has referred the HTP-IV tariff conditions as under:

- (1) 15% of the contracted demand can be availed beyond the night hours prescribed as per Para 16.0 above.
- (2) 10% of total units consumed during the billing period can be availed beyond the night hours prescribed as per Para 16.0 above.
- (3) In case the consumer failed to observe condition No.1 above during any of the billing month, then demand charge during the relevant billing month shall be billed as per HTP-I category demand charge rates given in Para 13.1 of this schedule.
- (4) In case the consumer failed to observe condition No.2 above during any of the billing month, then entire energy consumption during the relevant billing month shall be billed as per HTP-I category energy charge rates given in Para 13.2 of this schedule.
- (5) In case the consumer failed to observe above condition No.1 and 2 both during any of the billing month, then demand charge and entire energy consumption during the relevant billing month

shall be billed as per HTP-I category demand charge and energy charge rates given in Para 13.1 and 13.2 respectively, of this schedule.

- (6) This tariff shall be applicable if the consumer so opts to be charged in place of HTP-I tariff by using electricity exclusively during night hours as above.
- (7) The option can be exercised to switch over from HTP-I tariff to HTP-IV tariff and vice versa twice in a calendar year by giving not less than one month's notice in writing.
- 3.5. It is submitted that Appellant has crossed day consumption limit of 10% of total units, therefore energy charges calculated as per HTP-I tariff. The energy bill for September,2017 is prepared as per the provisions of tariff.
- 3.6. In reference to Para 2.4(4) Respondent has submitted that Appellant has opted HTP-IV tariff, it is responsibility of Appellant to comply the conditions of tariff HTP-IV to get the benefit of HTP-IV tariff.
- 3.7. In the energy bill of September,2017, energy charge has been calculated as per tariff condition of HTP-I tariff, however demand charges are taken as per HTP-IV tariff.
- 3.8. Respondent has submitted details of meter installed at the premises of Appellant, which are as under.

Make:	Secure.	Sr.No.:	PG5A4715
Mfg. Year:	March,2015.	AT No.	Secure/716/09.01.15
Class:	0.5 S.		

Arguments of appellant regarding meter accuracy is not correct. The contentions of Appellant that if load is less than the accuracy will be reduced is not correct. It can be confirmed from initial meter testing report by Hi-tech laboratory, Rajkot. As per the meter testing report, meter is tested considering all the factors and parameters which are required for precise working of meter. Whatever the accuracy of meter performed, it remains throughout common in a day time and night

time. It does not vary. So, day consumption limit with respect to total consumption will remain same with whatsoever accuracy.

- 3.9. Meter accuracy is perfect as per meter specification and testing report. Forum has correctly considered meter testing report as per meter Sr.No.PG5A4715 tested by Hi-tech laboratory, Rajkot and decided the subject issue.
- 3.10. In reference to Para No. 2.4(9), Respondent has submitted that case to case elements and aspects might be dissimilar so findings of such cases should not be applicable to all cases.
- 3.11. It is submitted that HTP-IV tariff conditions No.4 speaks as under:  
 “In case the consumer fails to observe condition No.2 above during any of the billing month, then entire energy consumption during the relevant billing month shall be billed as per HTP-I tariff category.”  
 Energy charge rates given in Para No. 13.2 of tariff schedule is applicable for calculation of energy charge. There is no any provision of night rebate under HTP-IV tariff.
- 3.12. Respondent has referred the Suo moto Petition of GERC in case No.1609/2016 and submitted that purpose of creation of HTP-IV tariff has been explained by GERC in the order and held that it is not permissible and the limits which are given has a specific purpose and these limits are available to the consumers for the maintenance activity only and breach thereof has to be treated as default.
- 3.13. Appellant is in a habit of violating terms and conditions of HTP-IV tariff which can be seen from the details given hereunder:

Month	Violation	Remarks
Jan.2017	% Day consumption recorded 10.09%	*CGRF case No.302/16-17, order in favour of PGVCL. *Hon'ble Ombudsman Case No.44/2017, order in favour of PGVCL. Hon'ble High Court SCA No.17854/2017, Status- Pending
Sept. 2017	% Day consumption recorded 10.06%	*CGRF Case No.144/17-18 order in favour of PGVCL. *Hon'ble Ombudsman case No.57/2018 for the present matter.
Jan. 2018	%Day consumption recorded 10.45%	Copy of the bill is attached herewith.

It is clear that the energy bill prepared for the month of September,2017 is in order as per prevailing tariff provisions and having no any error. There is no any penalty in the bill.

It is submitted that the energy bill prepared for September,2017 is in order as per prevailing tariff provisions and there is no any error. There is no any penalty in the bill.

**::: ORDER :::**

**4.0.** I have considered the contentions of the Appellant and the Respondent and the facts, statistics and relevant papers, which are on record, and considering them in detail, my findings are as under.

4.1. Aggrieved by CGRF order, Appellant has prayed as per Para No. 2.5 for revising the energy bill for the month of September,2017. The tariff is made applicable as per Tariff Orders issued by the Commission from time to time. As per Section 62(3) of Electricity Act, 2003, tariff is based on the purpose of use. Appellant is a HT consumer of Respondent, bearing consumer No. HT-23712 having contracted demand of 4000 KVA under HTP-IV tariff. Appellant is aware of use of electric supply during night hours i.e. 10.00 p.m. to 06.00 a.m. next day. Similarly, conditions of HTP-IV tariff is applicable for billing to appellant.

4.2. The energy bill for the month of September,2017 was prepared as per energy recorded as mentioned in Para 3.3. Percentage of day consumption found 10.06279791.

Tariff schedule published by GERC for HTP-IV tariff as mentioned in Para 3.4, Note-2 speaks about use of 10% of total units consumed during the billing period can be availed beyond the night hours prescribed as per Para No. 16.0 of tariff schedule, while energy consumption record more than 10% and in such case Note No.2 and 4 is require to be read with.

*“(2) 10% of total units consumed during the billing period can be availed beyond the night hours prescribed as per Para-16 above.*

*(4) In case the consumer failed to observe condition No.2, above during any of the billing month, then entire energy consumption during the*

*relevant billing month shall be billed as per HTP-I category energy charge rates given in Para 13.2 of this schedule.”*

Accordingly, Respondent has prepared energy bill for the month of September,2017 with HTP-I tariff as per Clause 13.2, fulfilling the criteria of tariff conditions.

- 4.3. Tariff for the year 2017-18 rate of HTP-I Clause 13.2 states as under:  
Energy charges:

For entire consumption during the month		
(a)	Up to 500KVA of billing demand	400 paise per Unit
(b)	For billing demand above 500KVA and up to 2500 KVA	420 paise per Unit
(c)	For billing demand above 2500 KVA	430 paise per Unit

Appellant has recorded total 660850 units consumption, out of which 594350 units consumed during night hours while 66500 units are consumed during day time, i.e. 415 units, which is more than 10% of total energy consumption, as per conditions for opting HTP-IV tariff during the month. Under such violation, as per Condition No.4 energy bill has to be prepared with Clause 13.2 of HTP-I tariff. In case of Appellant having contracted demand of 4000 KVA, applicable energy charges become 430 paise/unit instead of 225 paise/unit under HTP-IV category tariff. The whole energy consumption charged as per 430 paise/unit under violation of HTP-IV tariff condition Note-2.

- 4.4. The test was conducted by Respondent at Hi-tech laboratory, Rajkot on 04.07.2015.

Details of meter:

Meter: 3ph.4W.

Make: Secure Class: 0.5S

Type: E3MO54 Mfg. year: 3/2015

Voltage: 11KV/ $\sqrt{3}$ /110/ $\sqrt{3}$ . Frequency: 50 Hz

Current: -/5Amp.  $I_b$ : 5 A.  $I_{max}$ :10A

As per Test report No.PMHL/T/094/511 dated 06.07.15

(1) Test of meter constant (As per Clause 12.14 of IS 14697-1999).:

Requirement as per specification		
Energy active/reactive	P <sub>+</sub> (Active)	Q <sub>+</sub> (Reactive)
Meter constant: Imp/KWH/KVArh	160	160
Pulse counted by M.U.T.	804	806
Energy as per pulse	5.0250	5.0375
Energy recorded by M.U.T.	5.0242	5.0347
% error	-0.0163	-0.0561
Permissible error	±0.5	±1.0

(2) Limit of error due to variations of current:

Applied voltage	Applied current	P+	Active energy	
			%error	Permissible %Error
100%Vref	100% I <sub>b</sub>	UPF	0.061	±0.5
	10% I <sub>b</sub>	UPF	0.069	±0.5
			Reactive energy	
100%Vref	100% I <sub>b</sub>	UPF	0.028	±1.0
	10% I <sub>b</sub>	UPF	0.041	±1.0

4.5 As per Para 2.4(6)(c), appellant has made calculation and stated that inaccuracy in measurement of meter increases as load decreases. To redress said point it is required to calculate the data as under:

Here meter details are as under:

Make: Secure- DG5A4715. Class:0.5S

Ratio: -/5Amp. Connected load: 4000KVA

CTPT Ratio: 250/5A. PT Ratio: 11000/110V

Meter CTPT ratio is of -/5 Amp. i.e. base current is of 5 Amp for recording.

10% of contracted demand of 4000 KVA = 400KVA

Ampere loading will be 400/11KV = 36 Amp.

With CT ratio of 50 the Ampere loading on CT secondary side will be 36/50 = 0.72 Amp. i.e. I<sub>b</sub> (base current)

As per IS 14697 percentage error limit shown in Table-11.

Value of current	P.F.	% error for 0.5S Class meter
0.01 I <sub>b</sub> ≤ I <sub>b</sub> ≤ 0.05 I <sub>b</sub>	1	±1.0
0.05 I <sub>b</sub> ≤ I <sub>b</sub> ≤ I <sub>max</sub>	1	±0.5

As stated above, with base current at 10% contracted demand i.e. 0.72, meter can measure energy accuracy as per above mentioned table. Meter accuracy will be vary with change in Power Factor.

In this case, meter accuracy was carried out by Respondent at Laboratory as per Para 4.4, which is within permissible limit. Therefore, technical calculation made by appellant for recording of energy consumption by meter during day time period is not correct and not technically valid.

4.6. It is on record that Appellant has recorded more than 10% energy during day time which is accepted by both parties. As per submission made by Respondent in para No.3.13, Appellant has made violation in the month of January,2017 and January,2018 also, which shows that Appellant is habituated in utilizing energy consumption during the day time period under the Option of HTP-IV tariff.

4.7. Appellant has referred judgement of Hon'ble Ombudsman in case No.31 of 2007. In the said case, marginal violation of 19 units more consumption during day time has been taken into account against HTP-IV tariff conditions. Relevant conditions are as under.

(i) *5% of total units consumed and 10% of the contract demand can be availed beyond the prescribed hours for the purpose of maintenance.*

(ii) -

(iii) -

(iv) -

(v) *In case the consumer is not fulfilling the conditions of this tariff category, then such consumer for the relevant billing period will be billed under tariff category HTP-I.*

In instant case 415 units were recorded during day time under HTP-IV tariff option by Appellant. Here it is worth to note that as per said order it is mentioned that this judgement should not be straight way

applied in all such infringements of conditions without considering the facts and merits.

- 4.8. It is worth to state that HTP-IV tariff conditions are changed as per the recommendations of consumers by GERC from financial year 2009-2010.

For the Financial Year 2007-08 conditions under HTP-IV were

- (i) *5% of total units consumed and 10% of the contract demand can be availed beyond the prescribed hours for the purpose of maintenance.*
- (ii) *For the purpose of office lighting, fans etc., the consumer may apply for a separate connection.*
- (iii) *This tariff shall be applicable if the consumer so opts to be charged in place of HTP-I tariff by using electricity exclusively during night hours as above.*
- (iv) *The option can be exercised to switch over from HTP-I tariff to HTP-IV tariff and vice versa twice in a calendar year by giving not less than one month's notice in writing.*
- (v) *In case the consumer is not fulfilling the conditions of this tariff category, then such consumer for the relevant billing period will be billed under tariff category HTP-I.*

While conditions were revised for the Financial Year 2009-10 as under for HTP-V tariff.

- (i) *10% of total units consumed and 15% of the contract demand can be availed beyond the prescribed hours for the purpose of maintenance.*
- (ii) *For the purpose of office lighting, fans etc., the consumer may apply for a separate connection.*
- (iii) *This tariff shall be applicable if the consumer so opts to be charged in place of HTP-I tariff by using electricity exclusively during night hours as above.*

- (iv) *The option can be exercised to switch over from HTP-I tariff to HTP-IV tariff and vice versa twice in a calendar year by giving not less than one month's notice in writing.*
- (v) *In case the consumer is not fulfilling the conditions of this tariff category, then such consumer for the relevant billing period will be billed under tariff category HTP-I.*

Thus from the above criteria of use of energy during day time was revised from financial year 2009-10. Instead of 5%, 10% of total units consumed and instead of 10%, 15% of contract demand can be availed beyond the prescribed hours for the purpose of maintenance fixed up by GERC, under the option of HTP-IV tariff. For the maintenance point of view relaxation under utilization of energy and demand have been taken care by GERC.

Again said conditions under HTP-IV tariff was revised from Financial Year 2016-17, which is mentioned by Respondent in Para No. 3.4.

From the said conditions, it is revealed that both, energy consumption and record of demand parts separate out with maximum limit to use during day time for getting benefit under HTP-IV tariff. On failure of that conditions, billing under HTP-I tariff is scheduled as per the Condition No. 3 and 4 separately for energy consumption and demand charges. Therefore, failure in record of energy or demand, that parts are to be billed under HTP-I tariff. This is not a case of double penalty for violation of any part i.e. energy charges or demand charges.

- 4.9. The arguments about violation in energy is not affecting the distribution system. It is to note that no technical damage to the distribution system cannot be accepted in view of number of consumers having HTP-IV tariff plan and distribution company has to maintain grid discipline and if all consumers are pardoned for deviation in electric supply access to the condition, it would be impossible for distribution company to regulate electric supply in its area.

- 4.10. From the above observations, energy bill issued under violation of HTP-IV tariff conditions is as per schedule tariff approved by GERC for the year 2017-18. Appellant should have observed the conditions as specified in tariff order under option of HTP-IV tariff. The prayer of Appellant is not accepted and hence dismissed.
- 4.11. I order accordingly.
- 4.12. No order as to costs.
- 4.13. With this order, representation/Application stands disposed of.

(Dilip Raval)  
Electricity Ombudsman  
Gujarat State

Ahmedabad.  
Date: 10.08.2018.