

**BEFORE THE HONOURABLE KERALA STATE ELECTRICITY
REGULATORY COMMISSION**

In the matter of : (i) Load Factor incentive
(ii) Power factor incentive
(ii) ToD Demand charges

Petitioner : M/s Binani Zinc Ltd
Binanipuram, Ernakulam

Respondent : Kerala State Electricity Board
Pattom, Thiruvananthapuram.

With reference to the petition filed by M/s Binani Zinc Ltd, Kerala State Electricity Board (KSEB) may submit the following comments and objections on the proposal of the petitioner to introduce (i) Load Factor incentive, (ii) Power factor incentive and ToD demand charges.

I. ToD demand charges

1. The petitioner submitted before the Hon'ble Commission that, the prevailing ToD tariff structure approved by the Hon'ble Commission w.e.f May-2013 had resulted in unintended penalty to the petitioner compared to the tariff payable under pre-revised ToD tariff structure prevailing till April-2013. KSEB completely disagree with the submission of the petitioner. The argument is raised without appraising the facts fully.
 - (i) Hon'ble Commission vide the order dated 30th April-2013 had revised the ToD tariff w.e.f May-2013. The pre-revised ToD tariff in the State till April-2013 and Revised ToD tariff w.e.f May-2013 is detailed below.

Table-1. Comparison of pre-revised & Revised tariff w.e.f May-2013

| Particulqrs | Pre-revised ToD tariff | | | Revised ToD tariff (w.e.f May-2013) | | |
|----------------|------------------------|-------------|-----------------|-------------------------------------|-------------|-----------------|
| | Normal period | Peak period | Off-peak period | Normal period | Peak period | Off-peak period |
| Demand charges | 100% | 150% | 80% | 100% | | |
| Energy charges | 100% | 140% | 85% | 100% | 150% | 75% |

- (ii) As detailed above, Hon'ble Commission had completely dispensed with the ToD tariff for 'demand charges' w.e.f May-2013 onwards, however enhanced the penalty as well as incentive for the ToD tariff for energy charges. Obviously, the increase in demand charges if any on account of dispensing with the ToD tariff of demand charges may be compensated with the increase in incentive on energy charges at the revised ToD tariff.

(iii) It seems that, there is some mistake in the tariff computation given by the petitioner at the pre-revised and revised tariff for the period from February-2013 to July-2013. KSEB had verified and computed the demand charges and energy charges during the same period, i.e., from February-2013 to July-2013 as detailed below.

(a) Though there is slight differences in the zone wise consumption figures adopted by the petitioner compared to the actuals, KSEB has adopted the same zone wise 'Billing Demand' and 'Energy consumption figures adopted by the petitioner to have a proper comparison.

(b) The normal demand charges for the consumer is Rs 290/kVA/ month.

(c) Energy charges: Hon'ble Commission vide the order dated 30-04-2013 has revised the energy charge of the petitioner from Rs 4.00 per unit to Rs 4.30 per unit w.e.f May-2013. Hence the ToD tariff at pre-revised tariff and revised tariff for the period from Feb-2013 to April-2013 was computed with Energy charge @ Rs 4.00 per unit and from May-2013 to July-2013, the ToD tariff was computed at the energy charge @Rs 4.30 per unit. The details are given below.

Table-2. Comparison of Demand charges at pre-revised and revised TOD tariff

| Month | Billing Demand | | | Total Energy consumption (kWh) | Demand charges at pre-revised ToD tariff | | Demand charges at revised TOD tariff | | Increase in demand charges due to revision of TOD | |
|--------|----------------|-------|----------|-----------------------------------|--|------------|--------------------------------------|------------|---|------------|
| | Day | Peak | Off-peak | | (Rs) | (Rs/ unit) | (Rs) | (Rs/ unit) | (Rs) | (Rs/ unit) |
| | (kVA) | (kVA) | (kVA) | | | | | | | |
| Feb-13 | 15620 | 10970 | 19740 | 9729900 | 4586785 | 0.47 | 5724600 | 0.59 | 1137815 | 0.12 |
| Mar-13 | 17940 | 11130 | 20310 | 9464700 | 4978865 | *0.53 | 5889900 | 0.62 | 911035 | 0.10 |
| Apr-13 | 19700 | 11290 | 22000 | 10427000 | 5376358 | 0.52 | 6380000 | 0.61 | 1003642 | 0.10 |
| May-13 | 22480 | 15110 | 23080 | 10964600 | 6139928 | 0.56 | 6693200 | 0.61 | 553272 | 0.05 |
| Jun-13 | 18270 | 11300 | 19420 | 9251080 | 4970213 | 0.54 | 5631800 | 0.61 | 661587 | 0.07 |
| Jul-13 | 18250 | 11430 | 18960 | 10175060 | 4941165 | 0.49 | 5498400 | 0.54 | 557235 | 0.05 |

Note: Normal demand charge- Rs 290/kVA/month

Table-3. Comparison of energy charges at the pre-revised and revised ToD tariff

| Month | Zone wise Energy consumption | | | | Energy charges at pre-revised TOD tariff | | Energy charges at revised ToD tariff | | Increase in energy charges | |
|--------|------------------------------|---------|----------|----------|--|------------|--------------------------------------|------------|----------------------------|------------|
| | Day | Peak | Off-peak | Total | (Rs) | (Rs/ unit) | (Rs) | (Rs/ unit) | (Rs) | (Rs/ unit) |
| | (kWh) | (kWh) | (kWh) | (kWh) | | | | | | |
| Feb-13 | 4514800 | 1102800 | 4112300 | 9729900 | 38216700 | 3.93 | 37012900 | 3.80 | -1203800 | -0.12 |
| Mar-13 | 4611400 | 1028700 | 3824600 | 9464700 | 37209960 | 3.93 | 36091600 | 3.81 | -1118360 | -0.12 |
| Apr-13 | 5357700 | 1082000 | 3987300 | 10427000 | 41046820 | 3.94 | 39884700 | 3.83 | -1162120 | -0.11 |
| May-13 | 5485100 | 1378500 | 4101000 | 10964600 | 46873655 | 4.27 | 45702980 | 4.17 | -1170675 | -0.11 |
| Jun-13 | 4557700 | 910490 | 3782890 | 9251080 | 38905723 | 4.21 | 37670591 | 4.07 | -1235132 | -0.13 |
| Jul-13 | 4764412 | 1041228 | 4369420 | 10175060 | 42725394 | 4.20 | 41294272 | 4.06 | -1431123 | -0.14 |

Note: Energy charge: Rs 4.00 per unit till April-2013 and there after Rs 4.30 per unit.

(d) The summary of the net increase in tariff (both demand and energy charges together) to the petitioner on account of the revised ToD tariff is given below.

Table-4. Net increase in tariff to the petitioner on account of the revised ToD tariff.

| Month | Demand charge | | | Energy charge | | | Net increase due to revision of TOD | Remarks |
|--------|-------------------------|---------------------|--|-------------------------|---------------------|--|-------------------------------------|--|
| | At pre-revised TOD rate | At revised TOD rate | Increase on account of revision of TOD | At pre-revised TOD rate | At revised TOD rate | Increase on account of revision of TOD | | |
| | (Rs/ kWh) | (Rs/ kWh) | (Rs/ kWh) | (Rs/ kWh) | (Rs/ kWh) | (Rs/ kWh) | | |
| Feb-13 | 0.47 | 0.59 | 0.12 | 3.93 | 3.80 | -0.12 | 0.00 | Normal demand charge- Rs 290/kVA/month, Energy charge- Rs 4.00/kWh |
| Mar-13 | 0.53 | 0.62 | 0.10 | 3.93 | 3.81 | -0.12 | -0.02 | |
| Apr-13 | 0.52 | 0.61 | 0.10 | 3.94 | 3.83 | -0.11 | -0.01 | |
| May-13 | 0.56 | 0.61 | 0.05 | 4.27 | 4.17 | -0.11 | -0.06 | Normal demand charge- Rs 290/kVA/month, Energy charge- Rs 4.30/kWh |
| Jun-13 | 0.54 | 0.61 | 0.07 | 4.21 | 4.07 | -0.13 | -0.06 | |
| Jul-13 | 0.49 | 0.54 | 0.05 | 4.20 | 4.06 | -0.14 | -0.09 | |

(e) As detailed above, there is an over all reduction of 6 to 9 paise per unit on the tariff payable by the petitioner by the revised ToD tariff approved by the Hon'ble Commission vide its order dated 30-04-2013, hence there is no merit in the argument of the petitioner.

(f) It seems that, the petitioner had not appraised the substantial reduction in energy charges after the revised ToD tariff compared to the pre-revised ToD.

2. There is no meaning in comparing the impact of ToD with the hypothetical case study as provided by the petitioner, since all the consumers may be aware of the revised ToD tariff and may try to optimize their user pattern to get the maximum benefit as done by the petitioner.

3. The petitioner has further requested to re-introduce the ToD tariff for demand charges as it was prevailing in the State till last April-2013, however there was no proposal to restore the ToD tariff for energy charges. KSEB do not recommend for introducing the ToD tariff for demand charges considering the following.

(i) Generally two part tariff is being followed in the country consisting of (a) fixed charges/ demand charges based on the contract demand/ connected load of the consumer and (b) energy charges based on the quantum of electricity used by the consumers.

(ii) The general concept of the 'demand charges/ fixed charges' is for recovering a part of the revenue expenditure associated with the infrastructure created by the distribution utility for

providing supply to the consumers. The annual recurring cost associated with the infrastructure of the distribution utility involves interest on capital assets, depreciation, repair and maintenance expenses, part of the employee cost etc.

- (iii) Irrespective of the electricity usage by the consumers, the distribution utility has to incur the annual recurring cost associated with the infrastructure of the DISCOMS. Hence there is no meaning in linking the demand charges with the electricity consumption as well as its time of usage by the consumers.
- (iv) ToD tariff was introduced in almost all the State Electricity Regulatory Commissions across the country. The TOD tariff prevailing in other state is given below.

Table-5
TOD tariff prevailing in other States

| State | Particulars | Demand Charges | on Energy Charges /unit | | |
|----------------|-----------------------------|----------------|-------------------------|---------------------|----------------------|
| | | | Day | Peak | Off peak |
| Kerala | | Nil | Nil | 50% extra | 25% reduction |
| Andhra Pradesh | 11 KV& 33 KV | Nil | Nil | Rs1/Unit extra | Nil |
| Tamilnadu | | Nil | Nil | 20% extra | 5% reduction |
| West Bengal | 132 KV (optional) | Nil | Nil | Rs 2.26/U extra | Rs 2.20/U incentive |
| | 220 KV | | | | |
| | Summer | Nil | Nil | Rs 2.14/U extra | Rs 1.82/U incentive |
| | Monsoon | | | Rs 2.13 /U extra | Rs 1.81/U incentive |
| | Winter | | | Rs 2.12/U extra | Rs 1.80/U incentive |
| | 400 KV | | | | |
| | Summer | Nil | Nil | Rs 2.14/U extra | Rs 1.82/U incentive |
| | Monsoon | | | Rs 2.13 /U extra | Rs 1.81/U incentive |
| Winter | Rs 2.12/U extra | | | Rs 1.80/U incentive | |
| Maharashtra | | Nil | | Rs 1/U extra | Rs 0.75/U incentive |
| Uttarkhand | Upto 33 % LF | Nil | Nil | Rs 2.35/U extra | Rs 0.30/U incentive |
| | Above 33% and upto 50% LF | Nil | Nil | Rs 2.10/U extra | Rs 0.33 /U incentive |
| | Above 50% LF | Nil | Nil | Rs 1.80/U extra | Rs 0.36/U incentive |
| Madhya Pradesh | 132&220/400 KV | Nil | Nil | 15% extra | 7.5%reduction |
| Bihar | 132 KV above 7.5 MVA | Nil | Nil | Rs 1.08/U extra | Rs 1.08/U incentive |
| | C.D above 300 KVA(33/11 KV) | Nil | Nil | Rs 0.62/U extra | Rs 0.62/U incentive |

- (v) As detailed above, as per the information available to KSEB, none of the regulators across the country has not introduced ToD tariff for demand charges, considering the fact that it is not logical to link the demand charge with ToD tariff.
- (vi) However, almost all the utilities across the country including KSEB has been procuring substantial portion of the electricity

from short-term market. Presently, the electricity prices at the short-term market including 'energy exchanges', 'UI' and 'day ahead market' fluctuate with the demand and supply position of electricity. Considering the increase in demand during peak hours, electricity prices at the short-term market is being substantially higher during peak hours compared to 'normal day time' and 'night off-peak hours'. Further, entering into 'long term PPA and establishing new generating stations' exclusively for meeting the demand may results in under utilization of resources and also not economical. Considering the above, KSEB also recommends for ToD tariff for energy charges, which provide dis-incentive for peak usage and incentive for off-peak usage.

- (vii) Considering the above, KSEB also agree with steps taken by the Hon'ble Commission for dispensing with the ToD tariff for demand charges and rationalizing the ToD tariff for energy charges vide its order dated 30-04-2013.

Hence, KSEB may submit that, by the implementation of the new ToD tariff approved by the Hon'ble Commission vide the order dated 30-04-2013 has not resulted in any dis-incentive to the petitioner, but there was a net reduction in tariff to the extent of 6 to 9 paise per unit since the month of May-2013, i.e., after the implementation of the revised ToD tariff. It is further submitted that, the demand charges, which is intended for partly recovering the annual recurring cost associated with the infrastructure created by KSEB for providing supply, which need not be linked to the Time of the Day (ToD) tariff. The State Electricity Regulatory Commissions (SERCs) across the country has also not linked the demand charges with the ToD tariff. Considering the above, KSEB may request before the Hon'ble Commission to reject the proposal of the petitioner.

II. Load Factor Incentive

1. KSEB vide its submission dated 24-09-2013 has given a detailed appraisal on the issue of introducing load factor incentive in the State and recommended that, considering the ToD tariff structure prevailing in the State with the twin objective of reduction in peak load as well as shifting the peak demand to night off-peak period, there is no need to introduce further, incentive based load factor improvement in the Kerala Power System. Hon'ble Commission may kindly consider the reasons given their in as the KSEB's objections to reject the proposals of the petitioner. A copy of the relevant portion of the submission dated 24-09-2013 regarding the load factor incentive is marked as **Annexure-1**.

2. It is further submitted that, the proposal of the petitioner to compute the Maximum Demand as the average of the Maximum Demand recorded during each time zone, i.e., day, peak and off-peak is against the fundamental definition of load factor and it cannot be accepted.
- III. Power factor incentive
1. Hon'ble Commission vide the order dated 25-07-2012 on petition No. OP 23 of 2012 has enhanced the incentive rate of PF improvement to 0.25% of the energy charges from 0.15% of the energy charges for each 0.01 unit increase in power factor from 0.90.
 2. There is no meaning in comparing the PF incentives prevailing in other state, since the transmission losses, reactive loading by different categories of consumers are different.
 3. KSEB submit that, any further incentive on PF shall be made only after a detailed study on the financial impact of PF improvement through incentive system with the reduction in transmission losses. The petitioner has also not provided sufficient reasons for enhancing the PF incentives further. Hence the proposals of the petitioner may be rejected.
- IV. Other issues raised by the petitioner.
- The petitioner has prayed before the Hon'ble Commission to issue necessary orders to KSEB to pass on the benefit of lower tariff for interstate sales to EHT consumers and also to consider the improved hydel situation and pass on the effect of lower costs to EHT consumers.

The petitioner has not provided sufficient details with legal provisions to make such claims. KSEB may submit that, this is not the appropriate time to appraise such matters. As per the regulations and prudent utility practices, KSEB shall submit the actual details of power purchase along with supporting facts including the unbridged revenue gap accumulated over the years through the truing up petitions before Hon'ble Commission.

Considering the facts and submissions as detailed in the preceding paragraphs above, KSEB submits before the Hon'ble Commission to reject the proposals filed by M/s Binani Zinc Limited in total.

Chief Engineer (Commercial & Tariff)

Acc. KSEB submission dated 24-09-2013