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1 of 6

To,
The Secretary,
Telangana State Regulatory Commission,
Vidyut Niyantran Bhavan,
Sy. No.145-P, G.T.S. Colony, Kalyan Nagar,
Hyderabad – 500 045.

Lr. No.: ARR and Tariff Objection FY 2025-26/02,

Date: 17/03/2025.

Dear Sir,

Subject: Objections on ARR & Tariff Proposals for FY 2025-26 filed by TSNPDCL - Reg.

We are herewith attaching the copy of the Company's objections on ARR & Tariff proposals of TGNPDCL for FY 2025-26.

Thanking You,
For ITC Limited - Paperboards & Specialty Papers Division.

(Lakshmi Kumar V)
Senior Manager - Energy.

Encl.: Original + 5 copies with acknowledgement issued by TGNPDCL.

**BEFORE THE TELANGANA ELECTRICITY REGULATORY COMMISSION
AT HYDERABAD**

Name and full address of the Objector along with e-mail id and contact number	Brief details of Objection(s) /Suggestions against ARR, FPT & CSS Proposals of TGNPDCL	Whether copy of objections /suggestion & proof of delivery at Licensee's office enclosed (Yes/No)	Whether Objector wants to be heard in person (Yes/No)
ITC Limited – Paperboard & Speciality Papers Division, 6 th Floor Sattva Signature Tower, Road no 1 Banjara Hills, 500034 Email- LakshmiKumar.Velpuri@itc.in Contact-+91 9000080461	Objections against <u>grid support charges</u> as per the enclosed objection statement	Yes	Yes, in person or through counsel



**BEFORE THE TELANGANA ELECTRICITY REGULATORY COMMISSION
AT HYDERABAD**

OP Nos. 21 & 22 of 2025

In the Matter of :

Determination of Revised ARR for Retail Supply Business and Tariff Proposals including grid support charges for FY 2025-26

MEMORANDUM OF OBJECTIONS

filed on behalf of

**ITC Limited
Paperboards and Specialty Papers Division**

May it please the Hon'ble Commission :-

1. ITC Limited ("ITC"), the **Objector** herein, is a company under the Companies Act 2013 with its registered office at Virginia House, 37 J.L. Nehru Road, Kolkata 700071 and its paper and paper board manufacturing unit at Sarapaka Village, Bhadradi Kothagudem District, Telangana. The Objector has captive co-generation plant at the said unit. The Objector could not file this objection statement earlier and craves leave of this Hon'ble Commission to file the same now which may please be taken on record for its kind consideration in the interest of justice.
2. The captive generation of electricity at the Objector's aforesaid plant is by the co-generation process whereby heat energy used for pulp cooking, humidification, and drying is produced along with electricity. The said plant presently has seven T-G Sets of varying capacities aggregating to about 260.187 MVA. Four TG-Sets of 95.5 MVA is kept as a stand-by. The TG-sets and the loads are segregated into two networks internally, with 88 MVA in one network and 76.687 MVA in another network. Under normal operation, the TG-Sets are operated in island mode and the entire load is met exclusively from the TG-sets, no power being consumed from TGNPDCL.

The Consumer Service with TGNPDCL is presently with a CMD of 15MVA at 132 kV. Power is drawn from TGNPDCL within the CMD of 15 MVA partly for start-up purposes of the TG-sets and partly as standby power. The starting currents of motors during start-up is minimised by soft start arrangements. The power drawn during start-ups is always well within the CMD of 15 MVA.



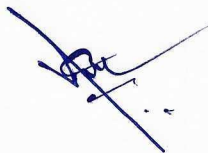
The said plant also receives and consumes power from its wind energy plant in Andhra Pradesh through inter-state open access. Under normal operation, the connection with the grid is only to enable import of the energy under open access. At such times, only one of the networks is connected to the grid.

There are electrical inter-locks in place to ensure that the connected loads trip whenever there is a tripping of the TG-Sets. Therefore, there is no transfer of load to the grid in the event of TG-Set failure or shut down. Mandatory protection arrangements are in place to clear internal faults within the time prescribed in the Grid Code.

In the normal operation of ITC's continuous process plant, there are no equipment which impose intermittent or transient loads. There is no harmonic injection from ITC's plant in excess of permissible limits.

Therefore, there is no circumstance by which it can be considered that any grid support is actually availed by ITC. The connection to the grid is utilised only for start-up power or stand-by within the CMD with TGNPDCL or for import of open access power.

3. TGNPDCL and TGSPDCL have proposed levy of grid support charges ("**GSC**") for the FY 2025-26 at the rate of Rs. 20.04 Rs/kW/Month X (total installed capacity of the generators connected to the Grid – OA capacity or the PPA capacity if any with the DISCOMS). The proposal of GSC is unreasonable and is being challenged herein both in respect of the levy itself as well as the quantum. The proposal of GSC is wholly misconceived and without any proper understanding or consideration of the concept of grid support/parallel operation as explained hereinafter.



Classification of Captive Power Plants (CPPs) operating in parallel with the grid

4. It is submitted that the different types of CPPs operating in parallel may more properly considered to be as follows with the characteristics stated hereunder so far as may be relevant to consider the levy of grid support charges –

- (a) *CPPs that are located at a different or distant location from the load with the energy for captive use being wheeled / transmitted under open access duly paying wheeling / transmission charges.*

These CPPs cannot be considered to be availing of grid support so as to be subject to levy of any grid support charges. Grid support charges can only be levied, where warranted, subject to considerations hereinafter submitted, only on the CPPs which are interconnected with their load and the utility grid by a point of common coupling [vide APTEL Judgement dated 08.10.2015 in Appeal No 167 of 2014, para 13.21] .

- (b) *CPPs having surplus capacity over and above their own requirement, connected in parallel with the grid in order to export power for sale through bilateral / IEX transactions under open access or to bank such surplus energy.*

These CPPs are connected to the grid to enable export of surplus power through open access (after start up). The CPP may or may not generate to its full installed capacity and the quantum of export may vary depending on exigencies from time to time. Grid support charges based on installed capacity, irrespective of the actual generation capacity, is clearly not for any support derived from the grid in the operation of the industry or the CPP.

Take an example of a CPP with a capacity of 200 MW where captive co-located load is only 50 MW with 150 MW being intended for export. Since avilment of grid support is only alleged in respect of part of the 50 MW load alone, there cannot be any alleged grid support with respect to the 150 MW export capacity. To mulct the entire 200 MW to any grid support charges is grossly disproportional, unjustified and irrational.

Typically, there would not be any import of power from the grid. In the absence of any factual data with respect to any particular industry with such a CPP, it would be arbitrary and unreasonable to consider that such an industry with such a CPP avails of any grid support warranting imposition of grid support charges.



In fact, if grid support charges are levied on such CPPs which connect to the grid only to export surplus power, it is tantamount to invidious discrimination mulcting such CPPs with additional charges for mere connectivity to avail open access, which is arbitrary and unlawful.

Consider co-generation plants (such as in processing industries or sugar industries). They require power from the licensees only for start up. Their captive consumption is only a part of their captive generation. The surplus power has to be exported. They do not require or avail of any grid support whatsoever after start up. Any levy of grid support charges in such cases based on the generation capacity is unwarranted and unreasonable.

Properly, such CPPs must be considered as not availing or intending to avail any grid support for their loads unless it is established as a fact in a particular case that grid support for the loads is availed.

- (c) *CPPs having load of such nature that results in large momentary peaks, starting currents and runs the plant in parallel to avail the support of grid beyond the contract demand.*

Firstly, it must be noticed that the momentary loads or starting currents depend on the nature of the loads. The CPP, being the generating plant, is not the cause or source of such momentary loads or starting current, and it is wholly unreasonable to consider the installed/generation capacity as relevant at all. The focus must therefore be on the load and not on the installed/generating capacity.

It is possible that some industries like steel industries or with arc furnaces may be constantly throwing large momentary loads. For example, if a steel industry with an arc furnace of 20 MW is operating with a CPP of 30 MW capacity, it may be that some support may be taken from the grid. On the other hand, if the same industry with an arc furnace of 20 MW is operating with a CPP of 100 MW capacity, it cannot be said that the operation of the arc furnace requires any support from the grid.

What is meant by "*availing the support of the grid beyond the contract demand*"? The contracted demand with the licensee gives the consumer a bundle of rights as to the use of electricity within the contracted demand. These limits are specified in the GTCS and/or the Grid Code with respect to, at least, starting currents. Necessaily, it must be construed that if the starting currents are within those permitted by the GTCS/Grid Code, such incidents are within the contracted demand.



- (d) *Process industries with CPPs run in parallel in order to avail continuous power supply, in the event of failure of CPP generating units.*

In such cases, the industry must necessarily have a contracted demand with the licensee to the extent of at least the expected recorded demand that would occur when the failure of the generating plant occurs.

It cannot be said or presumed that there is any grid support availed even when the generating plant is operating.

Further, it is the load and its nature that is relevant, not the installed /generation capacity.

- (e) *Renewable Energy CPPs (solar, or possibly eve hydel or wind) which may be co-located with the loads.*

The power from these CPPs is inherently infirm depending on the availability of the renewable energy source. In such cases, there would invariably be a CMD with the licensee for the whole of the demand. All alleged grid support are already included in the rights arising from the CMD itself. No reason and justification can exist for any further charges for any alleged grid support.

- (f) *Black start of CPP, where the startup power is required to restart the units.*

In such cases, the industry would invariably have a contracted demand with the licensee to the extent of start up power required.

- (g) *CPPs connected to the grid to receive / import renewable power to meet their RPPO.*

RPPO is imposed on consumption from captive generation(from fossil fuel). In order to comply with the RPPO, the industry needs to import renewable power. It is irrational to mulct such units when their connection to the grid is to avail open access for complying with a statutory obligation.

- (h) *CPPs whose generation capacity is intended to meet a part of their electricity requirement while the rest is met from the contracted demand with the licensee and/or through open access.*

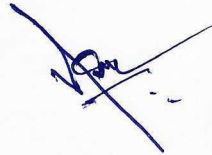
Consider the following parameters of an industry –

Connected load	60 MW
Largest single motor	5 MW
Pulsating / Momentary Loads	Nil
Actual Demand of Load	50 MW
CPP capacity	30 MW
Contracted Demand	10 MW
Through Open Access	10 MW



It requires consideration in the above case that there is a contracted demand of 10 MW with the licensee. The largest single motor being 5 MW, the starting current will always be within what is permissible within the contracted demand. Now, when this industry is in normal full operation, there is no grid support availed because all fluctuations in the load are within the contracted demand for which demand charges are fully paid. Unless it can be shown by measurable and verifiable means that the industry is availing anything beyond its contracted demand it cannot be subjected to any grid support charges arbitrarily.

In the above example, the proposed levy on 30 MW is unreasonable and irrational.

A handwritten signature in blue ink, consisting of a stylized 'S' followed by a horizontal line and a diagonal stroke.

Fallacies in the premises and assumptions of Discoms in seeking to justify GSC.

5. The levy of GSC is often supported by the observations of the Hon'ble Electricity Tribunal in its judgement dated 18.02.2011 in *Chhattisgarh State Power Distribution vs Godawari Power & Ispat Ltd.* The issues in that case were as to the capacity of the CPP for the levy of Grid Support Charges and as to whether such dispute was a consumer dispute. The CPP in that case was a co-located captive power plant. In paras 17 and 18 of the Judgement, observations were made as to the basis for levy of grid support charges enumerating certain features considered to be advantages to a co-located CPP. The levy of grid support charges itself was not in issue in that case.
6. The purported premise behind the proposal of licensees for GSC is that the co-located CPPs enjoy certain benefits by operating in parallel with the grid for which they pay nothing - hence a grid support charge is required to be levied. The licensees have often cited the following reasons seeking to justify the levy of GSC and the Objector submits its objections as under.
 - (a.) *The fluctuations in the load are absorbed by the utility grid in the parallel operation mode. This will reduce the stresses on the captive generator and equipments. The bulk consumer can operate his generating units at constant power generation mode irrespective of his load cycle.*

Objector submits that this is clearly an issue related to the load and its nature. It is not related at all to the generating capacity of the CPP which is irrationally sought to be made the subject of a charge. Consider an industry with load fluctuating between 8 to 10 MW where the CPP capacity is 12 MW and the industry has a 2 MW contracted demand for start-up. Clearly the CPP itself can meet the fluctuation of the loads without resort to the grid or even the contracted demand. In such cases, levy of charge on 10 MW is wholly unfair, unreasonable and unjustifiable.

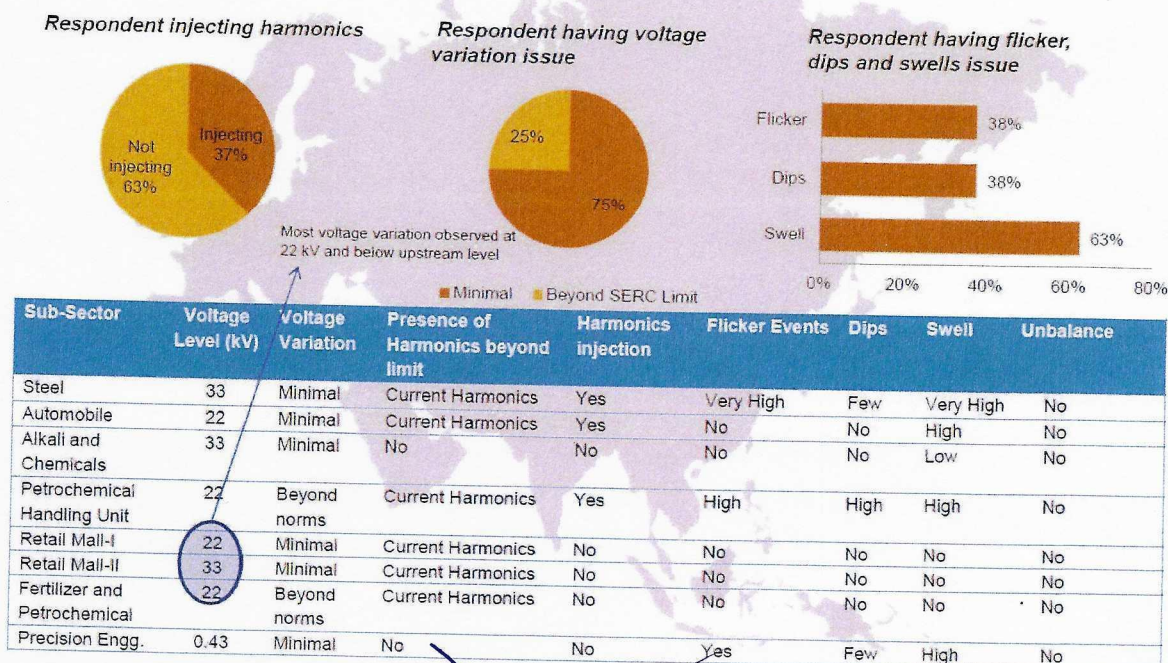
Consider another case of an industry with load fluctuating between 10 MW to 15 MW where the CPP capacity is 10 MW and contracted demand is 5 MW. It is alleged that the CPP can run constantly at 10 MW and the variations within 5 MW alone are taken by the grid. But the contracted demand with the licensee is already 5 MW and the load fluctuations over 10 MW are within the contracted demand for which demand charges are being paid. In such cases also, levy of charge on the CPP capacity of 10 MW is wholly unfair, unreasonable and unjustifiable. In case the 10 MW is sourced from another State of IEX under open access, there would be no such charges even though in that case also the 10 MW under OA is utilised fully and the fluctuations alone are met from the contracted demand.



(b.) Absorption of harmonics: The proposition cited by Discoms is that certain kinds of loads inject harmonics into the grid. These harmonics flowing in the grid system are harmful to the equipments and are also responsible for polluting the power quality of the system.

This is clearly an issue related to the load and its nature. It is not related at all to the installed/generating capacity of the CPP which is irrationally sought to be made the subject of a charge. Harmonics arise primarily from non-linear loads. Motors generally do not generate any significant harmonics except if they are, for any reason, overfuxed. It is not at all related to the installed/generating capacity on which the charge is irrationally proposed. Not all loads inject harmonics into the grid as alleged. The issue may be related to certain specific kind of industries such as steel mills or arc furnaces or industries using power electronics which need to be properly and distinctly identified. Following are the results of a survey by the Forum of Regulators (*Forum of Regulators has published a White Paper on Power Quality Regulations in India. This is extracted from a presentation at the Asia Power Quality Initiative*):

Survey findings



It may be noticed that there are only three categories of industries that are found to inject harmonics into the grid. Painting all other categories of industries with the same brush is unreasonable and irrational. The Grid Code specifies the limits of harmonics for consumers. If the harmonics are within the specified limits, there is no issue. An overview of the regulatory requirements with respect to harmonics and the inconsistencies therein are as follows (from the same source as above table) :

State	SERC Limits	CEA Regulation
Tamil Nadu	CEA grid connectivity standard	• THD – 5% with single harmonic content not exceeding 3 % for 33 to 132 kV. • THD – 2.5% with single harmonic content not exceeding 2 % for 220 kV. • THD – 2% with single harmonic content not exceeding 1.5 % for 400 kV. • THD – 1.5% with single harmonic content not exceeding 1 % for 765 kV.
Gujarat	THD – 5% with single harmonic content not exceeding 3 %	
Maharashtra	HT & LT (Industrial only) need to control harmonics at the levels prescribed by IEEE STD 519-1992	
Delhi	Not specified	
Madhya Pradesh	a. IEC Std 1000-4-7 or IEEE Std. b. THD not exceed 1% at the interconnection point of EHV system in accordance with IEC Std. 1000-4-7 c. Cumulative THD _v – 3% (for 220 kV and 132 kV) d. Cumulative THD _v – 8% (for 11 & 33 kV)	
Andhra Pradesh	a. Cumulative THD _v – 3% (for 132 kV and above) b. Cumulative THD _v – 8% (for 11 & 33 kV) c. THD _v – 5% with single harmonic content not exceeding 3 %, THD _i – not exceeding 1% at drawl from transmission	
Karnataka	a. THD 3% at 33 kV and 3.5% at 11 kV with no individual harmonic higher than 2.5%. b. THD _v – 9% (for 400 V and 45 kV), 4% (for 400 V and 45 V), 3% (for 220V and above) c. THD _v – 5% (69 kV and below), 2.5% (69 kV up to 161 kV), 1.5% (161kV and above), 2% (HVDC terminals)	

It is the essential responsibility of the DISCOMs to identify excessive injection of harmonics. If the harmonics are excessive, the Grid Code / Grid Standard must be enforced and the consumer must be asked to reduce the harmonics by installing filters or other means. It cannot be that excess harmonics, if at all there are any, are allowed, and a charge is levied. Such a charge must then be essentially be penal. Since this is specific to certain kinds of industries only, there cannot be such a penal charge on all industries generally just because some industries violate the standards.

(c.) *Negative phase sequence current is generated by unbalanced loads. The magnitude of negative phase sequence current is much higher at the point of common coupling than at generator output terminal. This unbalance current normally creates problem of overheating of the generator and other equipment of CPP, if not running in parallel with grid. When they are connected to the grid, the negative phase sequence current flows into the grid and reduces stress on the captive generator.*

This is clearly an issue related to the load and its nature. It is not related at all to the installed/ generating capacity of the CPP which is irrationally sought to be made the subject of a charge. Where there is some CMD with the licensee, the question as to whether the effect of unbalanced loads is within the CMD or not is to be carefully considered.

- d) *Captive power plants have higher fault level support when they are running in parallel with the grid supply. Because of the higher fault level, the voltage drop at load terminal is less when connected with the grid.*

This is clearly an issue related to the load and its nature. It is not related at all to the installed/generating capacity of the CPP which is irrationally sought to be made the subject of a charge.

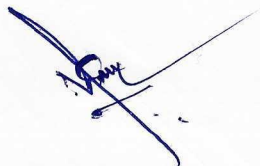
It is also an issue relating to starting currents and momentary loads which depend on the load and its nature in specific types of industries. It is stated too broadly. What is to be seen and considered is whether, in relation to specific types of industries, any alleged support from the grid is inconsistent with the contracted demand that the industry has with the licensee having regard to the provisions of the GTCS and the Grid Code.

Fault level is relevant only when a fault occurs. The Grid Code provides for the time within which faults may be cleared which is less than 0.06 seconds in case of fault and 0.10 seconds in case of overloads. On fault, it is not a case of grid support being taken, rather it is a case where a fault current flows for a short duration necessary to clear the fault and isolate it. Even in a domestic connection, faults do occur randomly, and it cannot be said that any grid support is being availed during the short period required for a fuse to blow or an MCB to trip.

It is also true that the CPP itself adds to the fault handling capacity of the grid. In the event of an earth fault in the grid at any location nearby to the CPP, fault current is also drawn from the CPP because of the low impedance path to the CPP, and the CPP itself may trip in such circumstances of earth fault in the grid. So, while waxing on the fault handling support of the grid to the industrial loads, it must not be forgotten that the CPP is also affected by faults in the grid.

- (e) *The grid provides stability to the plant to start heavy loads like HT motors.*

This is clearly an issue related to the load and its nature. It is not related at all to the generating capacity of the CPP which is irrationally sought to be made the subject of a charge.



Where the capacity of the CPP is intended for the entire industrial load, it is usually dimensioned to take the starting current of motors generally. The industry also has some contracted demand with the licensee. The GTCS and Grid Code provide limitations on starting currents. While DOL starting currents may be high, soft-start alternatives are there to reduce the starting currents. In any case, what needs to be seen and considered is that, in a given case, whether the starting currents of motors alleged to be drawn from the grid are inconsistent with the arranged contracted demand with the licensee. If it is consistent, then the licensee is already compensated through demand charges and there is no justification whatsoever for anything more.

- (f.) *The variation in the voltage and frequency at the time of starting large motors and heavy loads, is minimized in the industry, as the grid supply acts as an infinite bus. The active and reactive power demand due to sudden and fluctuating load is not recorded in the meter.*

This is clearly an issue related to the load and its nature. It is not related at all to the generating capacity of the CPP which is irrationally sought to be made the subject of a charge.

As stated supra, high starting currents for motors are recognised and permitted by the GTCS and the Grid Code. What requires to be considered is, again, whether such starting currents are consistent with the contracted demand that the industry has with the licensee.

On the issue of active and reactive power demand not being recorded in the meter, it is only because the metering methodology approved is to integrate over a 15 minute duration. There is no concept of instantaneous demand measurement. Demand is itself computed from the energy during the 15 minute interval. It cannot be denied that the active and reactive energy is duly recorded in the meter. Therefore, the demands due to fluctuating loads are also included and part of the demand measurement over the 15 minute integrating interval. Even in the cases where there is no CPP, the instantaneous demands due to load fluctuations are never separately measured, and these are subsumed in the measurement of demand as computed from the energy measured during the 15 minute interval.

- (g) *The impact created by sudden load throw off and consequent tripping of CPP generator on over speeding is avoided with the grid taking care of the impact.*

Load throw off is a random and rare event. When load is thrown off, the power generated flows to the grid till the generation is brought down within a few minutes by measures such as venting of steam and reduction of firing in the boiler. There is no "impact" on the grid as such. On the contrary, during the few minutes following the load throw off, the licensee receives inadvertent power free of charge. Such compensation by way of free power itself is more than sufficient for the alleged "impact" or event.



- (h) *The transient surges reduce the life of equipment of the CPP. In some cases, the equipment fails if transient is beyond a limit. If the system is connected to the grid, it absorbs the transient load. Hence, grid enhances the life of the CPP equipment.*

This is clearly an issue related to the load and its nature. It is not related at all to the generating capacity of the CPP which is irrationally sought to be made the subject of a charge.

Transient surges are significantly absorbed by the CPP itself as the impedance path to the CPP is the lowest. There may or may not be any spill over to the grid depending on the nature of the load and the capacity of the CPP (higher CPP capacity means lesser spill over to the grid). Further, transient surges are load nature related specific to specific types of load in specific kinds of industries. Over-generalisation is unwarranted and unreasonable.

- (i) *Load fluctuation of captive consumer are passed on to the utility's system thereby the efficiency of utility's system may be affected, which may also impact on utility's other consumers.*

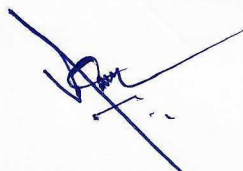
This is clearly an issue related to the load and its nature. It is not related at all to the generating capacity of the CPP which is irrationally sought to be made the subject of a charge.

The statement is an unwarranted and unreasonable over generalisation. It is not correct to say that load fluctuations are not handled by the CPPs because the generation of the CPPs can be matched to the load fluctuations. In the case of fluctuations in the nature of starting currents or the like, the submissions supra may be considered. In any case, the issue that also needs to be considered is whether the load fluctuations alleged to be passed on to the grid are consistent with the contracted demand arranged with the licensee or not.

The statement about effect on the efficiency of the utility's system is vague and hypothetical. There is no data or details as to how precisely, how often and to what extent the utility's efficiency is affected.

- (j) *In case of an ungrounded (or grounded through resistance) system supply, fault on interconnecting line (consumer's side) results in interruption of system. For single phase to ground fault which are 80 to 85% of the short circuit fault level, the grounding of the system is achieved through the neutral or step-down transformer of the utility, when the generators runs in parallel with the utility's grid. This supply is likely to cause damage to the terminal equipment's at utility's sub-stations and line insulators, as voltage on the other two healthy phases rise beyond the limit, under such conditions.*

This is entirely hypothetical. Supply system is grounded.



- (k) *The utility has to sustain the impact of highly fluctuating peak loads like that of arc furnace, rolling mill etc. for which it does not get any return on the capital invested to create system reserve.*

This is clearly an issue related to the load and its nature. It is not related at all to the generating capacity of the CPP which is irrationally sought to be made the subject of a charge.

As stated supra, if it is shown by real and factual data that certain kinds of loads and/or certain kinds of industry impact the grid as alleged, then the issue must be restricted to those cases only. It is wrong and unreasonable to paint all other industries and/or kind of loads with the same brush.

- (l) *The variation in reactive power requirement increases the system losses and lowering of the voltage profile. Utility has to bear the cost of such effects.*

This is clearly an issue related to the load and its nature. It is not related at all to the generating capacity of the CPP which is irrationally sought to be made the subject of a charge.

The statement is also vague. It also needs to be recognised that a CPP with a synchronous generator supplies reactive power to the grid which aids and improves the voltage profile of the grid.

- (m) *The lower voltage profile and fluctuations affect the service to the neighbouring consumers due to deterioration in quality of supply, thus resulting in revenue loss to the utility.*

This is an entirely vague statement without any factual basis in relation to CPPs or the generation capacity of the CPP.

- (n) *Non-recording of high fluctuating/ sudden active and reactive demand by the meter results in financial losses.*

This is incorrect. The submissions made supra with regard to metering may be considered.

- (o) *On account of increase in plant load factor of captive generator, additional revenues can be generated by the CPP by sale of surplus power to the utility.*

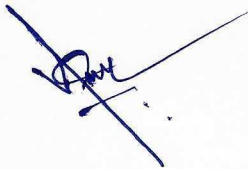
This is meaningless. There is never any simultaneous import and export of power. In the case of surplus power export, the loads are fed entirely from the CPP, and in addition the CPP exports surplus power for sale through the grid.



- (p) *In case of fault in a CPP generating unit or other equipment, bulk consumers can draw the required power from the grid and can save their production loss.*

This is only where the consumer industry has arranged for a stand-by from the grid by taking a contracted demand from the licensee for which the industry continuously pays demand charges to the licensee. In such circumstances, it is not understandable as to how this is a advantage to the generating plant. On the other hand, in this case, the licensee gets continuous revenue for the billing demand even though the contracted demand is utilised only when the CPP trips.

7. From the above submissions it is clear that the fluctuations, harmonics etc mentioned by the licensees are all load related specific also to particular kinds of loads specific to particular kinds of industries. There is no case whatsoever made out in respect of the CPP installed capacity with respect to any of these issues so as to warrant or justify levy of a charge on the installed capacity of a CPP.
8. Moreover, it may be seen and considered that, if Open Access is availed instead of having a CPP, the alleged incidences would occur even in that case, but there would be no such charges levied.
9. It is therefore submitted that the levy of any charges based on the installed/ generation capacity of the CPP is unreasonable and unjustified. If there are no sales of surplus power at a given time or if CPP is on standby, the levy of charge on idle CPP capacity is also most irrational and unreasonable. Even if the contracted demand from all sources and the export sale demand and standby capacity are deducted from the installed capacity, the very basis of CPP capacity as a starting point for levy of GSC is irrational and incorrect.



Need for Evolution of Criteria to determine when and to what extent grid support may be considered to have been availed.

10. Clearly the loads of all industries are not the same. Different industries have different loads. Different loads of different kinds of industries have different characteristics. Fluctuating loads are peculiar to certain kinds of industries only. High starting currents for large motors are specific to certain kinds of industries only. The CMD that an industry has with the licensee and the fluctuations that are consistent with such contracted demand are also relevant to be considered.
11. There are limitations imposed on starting currents under the Grid Code and/or the GTCS. There are also limitations on the harmonics that may be injected. The Hon'ble Commission may have to seriously consider if the requirements of the Grid Code/GTCS are to be enforced, or whether grid support charges levied condone and allow deviations.
12. It is therefore necessary for the Hon'ble Commission to evolve criteria to determine when and to what extent grid support may be considered to have been availed. It is only after such criteria on relevant considerations is evolved, the question of levy of charges (uniform or differentiated according to nature of industry/load) may be considered. It is submitted that all industries should not be painted with the same brush that suits only specific kinds of industries / loads.

Open Access Source vs CPP source of power

13. Consider the case of a consumer with a connected load of 20 MW, recorded maximum demand of 15 MW, and contracted demand of 5 MW with the licensee sourcing 10 MW power at exit point under open access. The OA power is constant and load factor for this source would be 100%. The load fluctuations (including starting current, momentary loads etc) of the consumer are all taken by the contracted demand with the licensee, and the load factor with the licensee supply would be much less. No grid support charges are levied for the load fluctuations being taken by the licensee alone.
14. Now, if the same 10 MW that was being sourced under open access is sourced from a co-located CPP, then grid support charges are sought to be levied. There is essentially no difference between the two, except that the source of the 10 MW is now co-located with the load. It is *per se* discriminatory against the CPP.

Non Co-located CPPs and Merchant/Independent Power plants

15. Non co-located CPPs, merchant power plants, third party generating units or other generators which inject into the grid for conveyance of electricity under open access duly paying the transmission / wheeling charges can never be the subject of any grid support charges. That is settled law pursuant to the Judgement of APTEL in Appeal No 167 of 2014 cited supra.



Roof-top Solar generation

16. In all cases of rooftop solar generation, the capacity is within the CMD/Connected load with the licensee. All the incidents of the alleged grid support are already fully covered by the arrangement for CMD / Connected load with the licensee and the Demand / fixed charges relating thereto. There cannot be any further charge as proposed or otherwise.
17. Without prejudice to the above, rooftop solar generation has a CUF of less than 15% and there can be no rationale or reasonableness to consider the nominal generation capacity for the proposed charge.
18. Rooftop solar generation is required to be encouraged under the National Policy and also the legislative policy of the Electricity Act 2003. The proposed levy on rooftop solar energy capacity is a retrograde measure and cannot be countenanced.

Quantification of Grid Support Charge as proposed by Discoms

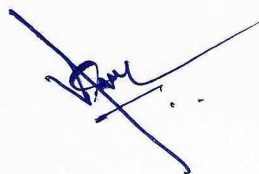
19. Without prejudice to the aforesaid submissions and other submissions hereinafter, the Objector submits that the manner of computing the grid support charges is arbitrary, unreasonable and irrational apart from unjustly enriching the licensees.
 - (a) The **CPP's installed/generation capacity** is, in any event, not at all a justifiable basis of charge; more particularly when the support is alleged to be required by the loads, and certain kinds of load in particular.
 - (b) Even if the charges were to be levied on a finding that grid support is indeed availed by any kind of industry with particular kinds of loads, or otherwise, the charges must be on a rational basis with some methodology relatable to the issue involved. The Hon'ble Commission must propose a methodology for arriving at the quantum of charge where it is justifiable to be levied. A study may be commissioned for the purpose and the affected consumers may be given an opportunity to respond to the outcome of such study and the consequent proposals for levy and quantification of the charge.
 - (c) The R&M costs of the TS-Transco and the TS-Discoms are already fully recovered from the retail supply tariffs and the transmission / wheeling tariffs. The amounts recovered by way of grid support charges would be over and above their approved ARRs and lead to unjust enrichment.
 - (d) The Objector herein is connected at 132 kV. The distribution system of the distribution licensee has no role to play whatsoever. There is no justification as to why the entities like Objector should pay a charge based on the R&M costs of both the distribution licensees. There is also no reason or rationale for a consumer within the area of operation of one distribution licensee paying charges which are based upon the R&M costs of another distribution licensee. The manner of computation is flawed, irrational and arbitrary.

Salient relevant changes brought about by the Electricity Act 2003

20. Prior to the coming into force of the Electricity Act 2003, CPPs were regulated in terms of section 21(3) of the Reform Act 1998 read with section 44 of the Supply Act 1948. At that time, the then APERC followed a policy of restricting CPPs on various grounds, inter alia, that the captive use of captive generation was affecting the finances of the licensee, and that "repatriation" of captive capacity to the grid was a necessity.
21. The erstwhile APERC in its Order dated 08.02.2002 had approved the levy of GSC for year 2002-03 which Order was the subject matter in the appeal before the Hon'ble Supreme Court which had upheld the GSC for the said year in its order dated 29.11.2019. This was for a period prior to when the Electricity Act 2003 came into force. Moreover, the present proposals irrationally and significantly alter the scope of grid support charges. The entire environment is changed. The Hon'ble Commission has to consider the matter afresh considering the completely changed legislative environment, and also after carrying out the necessary technical studies as relevant to this State.
22. The Electricity Act 2003 completely de-regulated captive generation and captive consumption. The legislative policy manifested freedom, encouragement and promotion of captive generation. The statutory National Electricity policy emphasises the need to encourage captive power plants as distributed generation and to tap the surplus capacity of captive generation plants. Thus CPPs were not only encouraged for meeting captive requirements but the setting up of capacity beyond captive requirements was contemplated and encouraged. This sea change in the legislative and statutory policy must be given due consideration.

The proposed grid support charges cannot be such as to be a measure of a punitive charge on CPPs with an effect of discouraging CPPs and/or to an effect of making CPPs unviable and/or with the hidden motive of "repatriation of captive consumption to the grid" and/or to facilitate purchase only from the licensee contrary to the legislative and statutory policy under the Act.

23. The Electricity Act 2003 introduced mandatory open access whereby a consumer could source power from anywhere. It has been held by a Constitution Bench of the Hon'ble Supreme Court in *PTC's* case that open access is one of the most important features of the Act. When Open Access consumers are not sought to be mulcted with any grid support charges, it needs to be carefully examined and considered as to whether CPPs and/or captive consumption ought to be mulcted merely because the CPPs are co-located with the consuming loads. A fresh look at the concept in the changed legislative environment is necessary.



Earlier reports of Grid Co-ordination Committee on Grid Support Charges are seriously faulty, insufficient and based on non-consideration of relevant industries besides being in violation of principles of natural justice

24. For the proposal of GSC for the FYs 2022-23 and 2023-24 by the licensees, the Objector had made elaborate written submissions and oral submissions before this Hon'ble Commission with copies served to Discoms. However, the said submissions were neither tabled before, nor considered by the Grid Co-ordination Committee ("GCC") to which Committee, this Hon'ble Commission vide its Tariff Order dated 23.03.2022 (for FY 2022-23) had referred the matter for a detailed study on the issue of parallel operation of captive power plants and consequent levy of grid support charges. The said GCC gave no opportunity of hearing to the Objector on the matter of parallel operation of captive power plants and/or the consequent levy of GSC. Thereafter, the GCC submitted its report on the GSC for the FY 2023-24 to this Commission under cover of its letter dated 07.10.2023 and in a consequent hearing before the Commission, the Objector filed its detailed objections dated 27.12.2023 to the said report of GCC and also filed a note of analysis on the basis of GSC in the hearing before this Commission on 08.01.2024. In such hearing the Commission directed the GCC to inform the Commission as to whether the detailed submissions earlier made by the Objector had been considered by the GCC and as to the decisions of the GCC thereon with reasons. The GCC failed and omitted to respond to the oral directions of the Commission.
25. The purported report of the GCC of October 2023 entitled "Final Report on levy of grid support charges for FY 2023-24" which was submitted to the Commission under cover of TS-Transco's letter dated 07.10.2023 purports to base its conclusions only on a purported study on solar power plants. The study and the conclusions are seriously flawed and biased. It does not deal with the issues raised by the Objector before this Hon'ble Commission in respect of levy of grid support charges. On the basis of the shallow and limited study on solar power plants, the Committee arbitrarily, unreasonably and irrationally purports to conclude to the effect that grid support charges are warranted for conventional, renewable energy and rooftop solar generators. The entire approach of the Committee was to somehow return a pre-determined and biased finding to support the proposal of the distribution licensee. Clearly the excessive dominance of the State Utilities in the Committee and the indifference of other members of the GCC has resulted in the biased, incoherent, technically incompetent and irrational report of October 2023.
26. The recommendation of the GCC in the above report was for the levy of grid support charges on an irrational and even basis to co-located CPPs, third party generating units availing Open Access, solar power plants, wind power plants and renewable energy power plants. The interaction of each of these different categories with the grid is distinct and different. They cannot all be painted with the same brush. It is trite law that unequals cannot be treated as equals. It is constitutionally impermissible. The approach is indicative of the GCC being unable to, or deliberately unwilling to, differentiate the chaff from the grain and/or the wood from the trees.

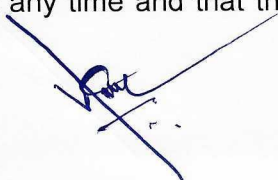


27. Since there is nothing in the GCC report of October 2023 specifically dealing with co-located thermal CPPs, the specific case of ITC was not considered at all together with the specific and extensive submissions of ITC.
28. After 08.01.2024, for the first time the GCC report of December 2022 on GSC for published and made available for public on the website of this Commission. The purported report of December 2022 also is a shallow and perfunctory exercise. Even in this report there is no reference, consideration, application of mind or discussion to the various issues raised by the Objector in its submissions before the Commission. It arbitrarily comes to sweeping and unwarranted conclusions on the basis of a simulation study with a single set of circumstances.

The simulation study considers a case of a CPP with 1x50 MW and 2x30 MW units. It purports to examine the short circuit capacity in grid-connected mode and the isolated mode. The conclusion sought to be reached is that the higher fault level of the grid at the point of coupling when in the grid connected mode facilitates absorption by the grid of load variations, harmonics, negative phase sequence currents etc. The other simulation study purports to evaluate the stability of the CPP in the event of outage of one of the units of the CPP. It is sought to be concluded that the operation of the other units of the CPP is more stable when in grid connected mode than when in isolated mode. From these two purported simulation studies it is sought to be arbitrarily and summarily concluded that certain benefits were received by all CPPs which improves the load, life of the equipment and stability of the CPPs, and that grid support is necessary for parallel operation of CPPs.

There is no study or consideration of any other configuration or of any single unit CPPs. There is no data of the incidence or magnitude of any alleged injection of harmonics or negative phase sequence currents by various types of industries and/or various types of loads. There is no study, data, application of mind or consideration as to the effect of starting currents of motors, arrangements for reducing or limiting starting currents and/or the real effects thereof on the grid. There is no enquiry, study, data, application of mind or consideration of the effect and consequences of the industrial unit also having a CMD with the licensee. Therefore, the study is merely a pretence to put forth a pre-determined and biased conclusion for the levy of grid support charges. So the said report of GCC of December 2022 cannot be relied upon to justify the levy of GSC on all captive power plants.

29. The Objector reliably learnt, inter alia from the letter dated 24.01.2024 addressed by a member of Grid Co-ordination Committee to this Hon'ble Commission enclosed herewith that the Objector earlier's objections and submissions before the Commission with regard to Grid Support Charges were not even tabled, circulated or discussed by the Grid Co-ordination Committee. The said letter dated 24.01.2024 specifically states that the Committee's reports dated 28.12.2022 and 07.10.2023 were never circulated or shared in the draft with the members of the Grid Co-ordination Committee at any time and that there was no discussion in the

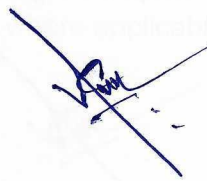


Committee which could be considered as the Committee having agreed to the reports as submitted or otherwise.

30. This Hon'ble Commission passed a common order dated 27.03.2024 in O.P. Nos. 80 and 81 of 2022 holding among others the following -
- (a) Grid support is an ancillary service extended by the utility to the consumers and that it has to be charged to the captive power plants who utilise the grid support; and
 - (b) Grid Support charges cannot be levied on captive power plants which are not co-located, IPPs, Solar rooftop plants and generators which have PPAs with the TS-DISCOMs; and
 - (c) The Grid Support Charges can be levied only on the captive power plants and the levy shall be limited to only the power consumed by the co-located loads.
31. Being aggrieved by the aforesaid common order dated 27.03.2024 passed by this Hon'ble Commission in O.P. Nos. 80 and 81 of 2022, so far as it relates to O.P. 80 of 2022, the Appellant has filed an Appeal before APTEL, in DFR No. 259 of 2024; and APTEL, vide its Order dated 03.09.2024 has granted leave to appeal. The said appeal is presently pending before APTEL.

Need for separate proceeding on the issue of GSC

32. Objector submits that that the issues involved in the levy and/or quantification of grid support charges are complex and require to be heard, considered and decided in a separate proceeding. The issue requires elaborate arguments and consideration. In this context, it is submitted that –
- (a) The licensees must first provide real data and facts on the incidence of grid support being actually availed by different types of industries, and they must also provide details of how the proposed quantification of the charges is justified with reasons.



- (b) The Hon'ble Commission may cause a scientific study to be conducted by an appropriate technical organisation on the issue of the actual incidence of avilment of grid support by CPPs of different types of industries and the appropriate methodology of computation of the quantum of grid support charges for each such type of industry.
- (c) The Hon'ble Commission may then issue a discussion paper on the levy and quantification of grid support charges for different types of industries with CPPs having regard to –
- (i) The wide changes that have been brought about by the Electricity Act 2003, inter alia, the introduction of open access and the legislative policy of de-regulating CPPs and the legislative and national policy of promoting CPPs; and
 - (ii) The study report commissioned by this Hon'ble Commission and also the various studies conducted by various State Commissions; and
 - (iii) The approach and orders of various other State Commissions on the issue; and
 - (iv) Submissions made by parties on the GSC including those made by ITC.
- (d) Thereupon the Hon'ble Commission may initiate proceedings to determine the scope of levy or otherwise of grid support charges and/or the methodology for determination of the charges where applicable.



Prayer

The Hon'ble Commission may (a) cause a scientific study to be conducted by an appropriate technical organisation on the issue of the actual incidence of availment of grid support by CPPs of different types of industries and the appropriate methodology of computation of the quantum of grid support charges for each such type of industry; and

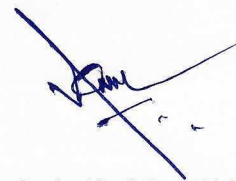
(b) issue a discussion paper on the levy and quantification of grid support charges for different types of industries; and

(c) evolve the criteria as to when and to what extent grid support can be considered to be availed and to determine the charges leviable duly differentiated on the nature of load and/or nature of the industry duly providing for hearing of the affected parties.

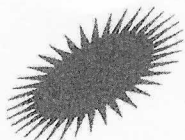
Participation at Public Hearing – Oral Submissions

The Objector desires to be heard in person or through counsel at the Public Hearing and reserves its right to make additional submissions.

17th March 2025



On behalf of the Objector



NAVA BHARAT ENERGY INDIA LIMITED

NAVA BHARAT CHAMBERS, RAJ BHAVAN ROAD, HYDERABAD - 500 082, TELANGANA, INDIA

NAVA BHARAT

NAVA / 56 /2023-24

January 24, 2024

The Secretary,
Telangana Electricity Regulatory Commission,
5th Floor, Singareni Bhavan
Red Hills, Hyderabad - 500 004

Dear Sir,

Sub: DISCOM's proposal for levy of grid support charges- Public hearing conducted by the Hon'ble Commission on 08.01.2024 -Reg

Ref: Reports dated 28.12.2022 and 07.10.2023 submitted by the Chairperson, Grid Coordination Committee, to the Hon'ble Commission

With reference to the above-mentioned subject, as a Member of the Grid Coordination Committee, I would like to bring the following to the kind notice of the Hon'ble Commission

1. In the matter of grid support charges, the Grid Coordination Committed (GCC) has conducted 3 meetings but the objections submitted by the stakeholders /CPPs at the time of tariff hearing were never circulated to the Members of the GCC or tabled at any meeting of the GCC or discussed at any meeting of the GCC.
2. During the GCC meetings, the representatives of the DISCOMS have exhibited a power point presentation on technical study carried-out by them but the hard copies of the presentation were not circulated or made available to the members of the GCC so as to enable them to study the same.
3. The reports submitted by the GCC to the Hon'ble Commission dated 28.12.2022 and 07.10.2023 were never circulated or shared in draft with the members of the GCC at any time. There was no discussion at the GCC which could be considered as the GCC having agreed to the reports as submitted or otherwise. We have noticed the reports very recently only from the website of the ERC.

Thanking you,

Your's sincerely,

Srinivas P
Member, Grid Coordination Committee

