



# NAVA BHARAT VENTURES LIMITED

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

NAVA BHARAT

NBV/FIN/ 608/2021-22

January 27, 2022

**The Secretary,  
Telangana State Electricity Regulatory Commission  
5<sup>th</sup> Floor, Singareni Bhavan, Red Hills,  
Hyderabad- 500 004**

Dear Sir,

Sub: Proposal of TS DISCOMs for determination of Grid Support charges for parallel operation of CPPs for the FY 2022-23 and your Notice for inviting Comments and Suggestions thereon- Submission of our objections -Reg..

Ref: TS DISCOMS ARR filing dated 30.11.2021 and Public Notice dated 29.12.2021.

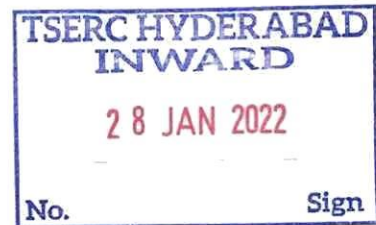
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With reference to the above-mentioned subject, we are herewith submitting our objections in the matter of ARR filed by TSNPDCL and TSSPDCL for determination of Grid Support charges for parallel operation of Captive power generating plants in Telangana.

We request the Hon'ble Commission to provide us the opportunity and permit us to submit further submission during the course of public hearing on 21.02.2022 and 25.02.2022 or as determined by the Hon'ble Commission either by us/our representative and our legal counsel, details as furnished below.

1. Mr. GRK Prasad,  
E-mail: [grkprasad@nbv.in](mailto:grkprasad@nbv.in) and [psrinivas@nbv.in](mailto:psrinivas@nbv.in)  
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2. Mr. Challa Gunaranjan,  
CKR Associates,  
Advocates and Legal Advisors,  
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Thanking you,

**Yours faithfully,  
For Nava Bharat Ventures Limited**

**GRK Prasad  
Executive Director**

Encl: As above

Copy to : 1. The Chief General Manager, (IPC& RAC) , TSNPDCL, Warangal.  
2. The Chief General Manager, (IPC&RAC), TSSPDCL, Mint compound,  
Hyderabad

**BEFORE THE HON'BLE TELANGANA ELECTRICITY REGULATORY  
COMMISSION: SINGARENI BHAWAN, RED HILLS: HYDERABAD**

**In the matter of:**

**Determination of Aggregate Revenue Requirement (ARR) for Retail  
Supply Business for the year FY 2022-23 under Section 62 of the  
Electricity Act, 2003.**

**In the matter of:**

**Southern Power Distribution Company of Telangana Ltd., &  
Northern Power Distribution Company of Telangana Ltd.,**

**...Applicants**

**OBJECTIONS FOR THE PROPOSAL OF GRID SUPPORT CHARGES FOR FY 2022-23.**

1.0 While filing the Tariff Proposals (ARR) for FY 2022-23, The Distribution Licensees in Telangana have proposed, inter alia, a levy of Grid Support Charges on Captive Power Plants (CPPs) in Telangana for parallel operation with Grid as mentioned below.

*“Persons operating Captive Power Plants (CPPs) in parallel with T.S. Grid have to pay ‘Grid Support Charges’ for FY 2022-23 on the difference between the capacity of CPP in kVA and the contracted Maximum Demand in kVA with Licensee and all other sources of supply, at a rate equal to 50% of the prevailing demand charge for HT Consumers. In case of CPPs exporting firm power to TSTRANSCO, the ~~is~~ capacity, which is dedicated to such export, will also be additionally subtracted from the CPP capacity.”*

In the ARR, The DISCOMS considered the erstwhile APERC’s Order dated 08.02.2002 referring to the para 64 of Judgement of Hon’ble Supreme Court Order dated 29.11.19, the excerpt of which is as below,

*64. Any Government Order or Incentive Scheme does not govern the Grid Support Charges. Grid Code is the basis for levy of the Grid Support Charges, which came to be approved by the Commission on 26.5.2001. The same is also reflected in the impugned order. ....The Grid Support Charges can be levied, and the order dated 8.2.2002 of the Commission is, thus on the parity of the reasonings, has to be upheld considering the provisions of Section 21 (3) of the Reforms Act, 1998. Under section 11 read with section 26 of the Reforms Act, 1998, all fixed charges under the distribution and Grid Support Charges are leviable only at the instance of a distribution company, and because of the discussion above, the Commission has the powers to determine it. In the*



*agreements also there is a power where the Board could have fixed the Grid Support Charge unilaterally, but because of Reforms Act, 1998 came to be enacted, the application was filed in the Commission. After that, the Commission has passed the order in accordance with the law. We find no fault in the same. Thus, the order of the Commission concerning the Grid Support Charges has to be upheld... ”*

The Hon'ble Supreme Court upheld the Order of APERC but the facts remains that there was nothing mentioned in the Grid Code on grid support charges and/or under the provisions of the Reforms Act, 1998. But unfortunately, there was no mention about the provisions of the Electricity Act 2003 (The Act). In fact there is no provision in the Act for determination of Grid Support Charges. The provisions of the Reforms Act 1998 are applicable only till implementation of Electricity Act 2003.

- 2.0 We, Nava Bharat Ventures Limited, own and operate 114 MW Captive Power Station comprising one 50 MW Unit and two 32 MW Units at Paloncha, in Kothagudem-Bhadradi District wish to submit our objections and concerns on the proposed levy of Grid Support Charges by TS DISCOMS as under.
- 3.0 While proposing the above GSC, the DISCOMs have considered the following advantages to CPPs relying on The Hon'ble Chhattisgarh State Electricity Regulatory Commission's (CSERC) discussion paper on parallel operation charges dated 01.06.2008 and Order dated 31.12.2008, **the excerpt of which is as follows:**

“10.1 *Advantages to CPPs:*

- (1) *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.*
- (2) *Fluctuating loads of the industries connected in parallel with the grid inject harmonics into the grid. The current harmonics absorbed by the utility grid is much more than that by CPP generator. These harmonics flowing in the grid system are harmful to the equipments and are also responsible for polluting the power quality of the system.*
- (3) *Negative phase sequence current is generated by unbalance 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 generators and other equipments of CPP, if not running in parallel with grid. When they are connected to the grid, the TSNPDCL Tariff & Cross Subsidy Surcharge Proposals for FY2022-23 negative phase sequence current flows into the grid and reduces stress on the captive generator.*



- (4) *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.*
- (5) *On account of increase in plant load factor of captive generator, additional revenues can be generated by the CPPs by sale of surplus power to the utility.*
- (6) *In addition to the above, CPPs enjoy the following advantages also: (i) 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. (ii) The grid provides stability to the plant to start heavy loads like HT motors. (iii) 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. (iv) 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. (v) 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 CPP equipments..*

4.0 In the above matter, The Power Distribution Companies in Telangana and The Hon'ble Telangana Electricity Regulatory Commission have invited the stakeholders to file their comments/suggestions/objection, if any, on or before 5.0 pm on 28.01.2022.

**5.0 Our objections against the proposed Grid Support Charges are set out below for your kind consideration and disposal:**

#### **5.1 HISTORY OF GRID SUPPORT CHARGES (GSC):**

1. The Grid Support Charge (GSC) was initially levied by the erstwhile Hon'ble APERC vide Order in O.P.No. 1 of 1999 dated 08.02.2002 in the context of the AP Electricity Reform Act, 1998. The GSC order was implemented vide Tariff Order FY 2002-03 from 01.04.2002. The same was challenged before the Hon'ble High Court for the erstwhile State of A.P which was decided in favour of the generators/Captive Power Producers (CPPs) the levy of grid support charges was set aside. An Appeal was filed by APTransco (Civil Appeal No. 4569 of 2003) in the Hon'ble Supreme Court. The Hon'ble Supreme Court, vide its judgement dated 29.11.2019 affirmed the orders of the erstwhile Commission.
2. It is pertinent to note that the prevailing conditions during 2002 and the present are totally different. When the Act is not in existence, there was no concept of Open Access, Transmission and Wheeling. The same were allowed by means of mutually agreed agreements at that time.



3. It is pertinent to note that the erstwhile APERC was constituted under the AP Electricity Reform Act, 1998, and passed the order in O.P.No.1 of 1999 in exercise of its powers under the said Act.

## **5.2 THE IMPACT OF THE ELECTRICITY ACT, 2003:**

1. In 2003, the Electricity Act, 2003 ("Act") came into force. The Act brought in substantial changes to the previous regime, including the establishment of State Commissions, delicensing of Generation, unbundling of transmission and distribution, specification of tariffs and charges, crystallized the scheme of Open Access, brought in procedures and standards to enforce discipline, etc. However, it left the Commissions established by States under earlier State enactments (such as the AP Electricity Reform Act, 1998) untouched and treated them to be Commissions established under the Act, essentially conferring them with powers under both Acts, in as much as the State enactments were not in derogation to the Act.
2. Open Access was introduced under Section 42 of the Act, in pursuance to which APERC Regulation Nos.2 of 2005 and 2 of 2006 were also promulgated by the erstwhile Commission.
3. Under the provisions of the Act, a separate agency by SLDC/RLDC/NLDC were created to take care of the Grid. SLDC/RLDC is responsible for maintaining grid security, Load forecasting, scheduling and dispatching and balancing of generation and demand (load). The ARR of SLDC was already approved in the MYT Tariff 2021-23. The DISCOMs have no role in maintaining Grid security and have to comply with the directions issued by SLDC/RLDC. Hence, in the present scenario, there is no need to propose GSC by DISCOMs and the DISCOMs have no role in seeking GSC from CPPs connected at 132 KV level.
4. TSTRANSCO and DISCOMs are responsible for Transmission and Wheeling business and can levy these charges only while the levy of GSC at 132 KV level is under the purview of SLDC only. Therefore, TSTRANSCO and DISCOMs have nothing to do with GSC. The ARR of Transmission and DISCOMs distribution business is recovered through Transmission charges and wheeling charges as approved in the relevant MYT orders. As the present ARR and Tariff proposal is to recover the retail supply business costs, the DISCOM has no role in proposing any GSC at voltage level 132 KV.
5. It is also pertinent to note that this Hon'ble Commission is constituted under the Act, and thus the earlier AP Electricity Reform Act, 1998 under which GSC were earlier determined is neither applicable nor relevant in the present day. The Act, 2003 specifically lays down the charges and tariffs to be collected, and no charges beyond what is prescribed can be levied. Admittedly, there is no charge such as GSC mentioned in the Act or the regulations, let alone under S.62 under which the



present petitions are filed, and as such, any such proposal to levy GSC is without jurisdiction.

6. It is thus submitted that the scope of present ARR for Retail Supply Business for FY 2022-23 should be strictly confined in terms of Section 62 of the Act r/w Regulation 4 of 2005 as adopted under Regulation 1 of 2014, and Section 42 of the Act for the purpose of determination of CSS and any proposal of the DISCOMs to levy GSC is itself misconceived and patently without jurisdiction.

**Without Prejudice to above submissions of the very authority and jurisdiction to levy GSC, the following further submissions are made.**

- 5.3 Captive Power Generation is delicensed under the Electricity Act so as to lessen the burden on the Grid in meeting the distributed loads. The provision in Para 5.2.26 of National Electricity Policy 2005 notified by Govt of India laid emphasis on grid connectivity of captive generators even under open access regime which is reproduced below:"

*"Under the Act, captive generators have access to licensees and would get access to consumers who are allowed open access. Grid inter-connection for captive generators shall be facilitated as per Section 30 of the Act. This should be done on priority basis to enable captive generation to become available as distributed generation along with the grid."*

In the spirit of this legislation and rules framed thereunder, determination of Grid Support or Parallel Operation Charge should follow the principles of transparency, actual forbearance and fair computation based on time tested methodology. The proposed levy does not meet any of these criteria and is arbitrary.

- 5.4 In the case of CPPs availing Open Access for transmission and wheeling of power from the generation point to the consumption point, Grid levies charges as determined by the regulator from to time. Even in these cases there is an established mechanism of UI charges which essentially address the so-called grid support or parallel operation. The proposed levy by the TSDISCOMs is therefore quite arbitrary, excessive and is not supported by quantifiable data.
- 5.5 The Transmission system of the Transco/Discom should be so designed that it should take care of fluctuating load of the consumer as it is the duty of the transmission licensee under Section 40 of Electricity Act, 2003. Moreover variation of load of a consumer having CPP is much less than a consumer without CPP.
  1. CPPs absorb some amount of harmonics whereas a consumer without CPP inject full quantum of harmonics generated to the grid.



2. The unbalanced voltage of the grid is a source of negative phase sequence current which is absorbed by the generators of CPP.
3. Fault level depends upon the generation capacity connected to the grid. The parallel operation of CPPs with the grid is infact beneficial with some degree of voltage support that the CPPs extend to the Grid
4. As per Regulations of Supply Code, Industries having CPPs can draw emergency power up to the capacity of largest generating unit by paying required tariff. CPP's drawl of power is limited to "start-up power" that too when there is total loss of generation of the CPP. The drawl of power for production purposes, is limited to the CMD as per the Power Supply Agreement with the DISCOM. Otherwise, penalty is attracted. Overdrawl is prevented by proper setting of the relays at the Grid Sub-station.
5. It is wrong to state that active and reactive power demand due to sudden and fluctuating load are not recorded in the meter. Billing is done for all consumers by integration over 15 minutes period and this is also applicable for CPPs and so it does not result in any undue advantage.
6. Due to injection of power by CPPs the load on the transformers in the grid reduces resulting in less transformer loss."
7. The CPP are acting as distributed generator at the load center for which the transmission and distribution loss has been reduced to great extent.
8. As per Section 7 of the Electricity Act, 2003 any generating company may establish operate and maintain a generating station if it complies with State Grid Code and standards of grid connectivity as referred in Section 73 (b) of the Act. Both Tariff Policy and National Electricity Policy emphasizes the need for unhindered connectivity of CPPs to the grid. The proposed and arbitrary quantum of Grid Support Charge makes the captive power generation unviable and the spirit of the act and the rules framed thereunder are thus vitiated.
9. There is no provision in the statute that empowers the DISCOMS to levy Grid Support Charges on the CPPs. They, on the other hand are benefited as CPPs absorbed some amount of harmonics. On the contrary consumer without CPPs transmit full quantum of harmonics to the grid. The DISCOMs/TRANSCO is not taking any step to install suitable equipment to filter the harmonics and injecting those pollutants to the grid for which the CPPs are forced to suffer. The grid voltage is always unbalanced due to various categories of *consumers* and hence is a source of negative phase sequence current which cause stress on the generators of CPPs.



10. It is relevant to mention the observation and comments of The Hon'ble Orissa Electricity Regulatory Commission in a similar matter, in its Order dated 31.03.2014 in Case No. 46/2012, the excerpt of which is as follows:

i) Para- 15 of Order:

*“We heard the parties at length and also perused the technical report submitted by OPTCL. The present installed capacity of the CGPs in the State as submitted by OPTCL is 5173 MW which is more than or equal to capacity of other generators connected to Odisha Grid including Odisha share of power from Central Generation Stations. We agree with the contention of CCPPO that the pollutants of the Grid like fluctuations in frequency and voltage, negative phase sequence, distortion due to harmonics etc. are the resultant effect of all synchronous machines like generators and motors of the Grid system. These pollutants are injected in to the grid not only by CGPs but also by other independent generators and machines like motors and arc furnaces of the consumers. Holding industry having CGPs only responsible for this is not correct”.*

ii) Para-16 of Order:

*“After going through the submission of various stake holders of the grid system we conclude that the behaviour of industries having CGPs and also without CGPs varies case to case basis. There are ample provisions in the Odisha Grid Code to regulate the behaviour of entities connected to the OPTCL system. Hence, a generic method of calculation of Grid Support Charges for all industries may not be proper. The Petitioner has failed to submit a State-wide study before us on which a decision could have been taken. One solution fits all can't be applicable here. So implementation of a model of another State in our State will not be proper.”*

iii) Para- 17 of Order:

*“There are enough provisions in Odisha Grid Code, 2006 to maintain quality supply in the grid system. Regulation 4.7 of Odisha Grid Code discuss elaborately the ideal behaviour of constituents of the Grid. OPTCL should play the role of watchdog and analyze the pollutant injected by various constituents of the grid system. CGPs and industries injecting pollution should be directed to take up remedial measures like installation of capacitors, filters for harmonics, etc. so that grid pollution will be minimized. The non-compliance by any industry or industry having CGP of the Grid Code should be dealt as per Regulation 1.18 of OGC, 2006. **Therefore, the prayer of OPTCL for levy of Grid Support Charges is not acceptable.**”*





11. Further, when GSC was proposed by APERC during the year 1999 and 2002, the Electricity Act was not in force. The Act is in force from 2003 and Section 9 of Electricity Act does not differentiate between CPP and IPP as far as grid connectivity is concerned and hence both should be treated equitably from the viewpoint of grid connectivity and support.
12. The proposed levy of GSC aims to stifle the consuming industries by this arbitrary levy, which in turn erodes the viability of the principal industry to a point that it must perform cease operations.
13. CPPs have repeatedly expressed their willingness to provide additional protections in their facilities as desired by the grid to see that no untoward load throwbacks or fault currents or reactive power surges happen.
14. The levy of GSC in 1999 was proposed when the generation shortfall was prevailing, and the TSDISCOMS were going through occasional R&C periods and frequency fluctuations, etc. when the Regulator considered that the proposed levy had merits. However, the TS Grid has since improved / made many strides in Grid size, availability of power and attained stability and is one of the few Grids in the country being engaged in export of power on a steady basis. Aggregate capacity of the CPPs now is relatively marginal compared to the Grid Size and no real forbearance could be possible warranting such huge and arbitrary levy.
15. Grid Support Charges can not be a substitute for Demand or Capacity Charges which are determined on a wider basis by the regulator. So the proposed levy of Grid Support Charges based on applicable demand charge is arbitrary, excessive and results in undue enrichment of the TSDISCOMs at the expense of CPPs
16. For the various reasons cited above, the Grid situation requires to be thoroughly reviewed with reference to the fact whether the Grid suffers any forbearance in providing parallel operations of CPPs. We request the Hon'ble Commission to procure from the Licensees that such a review be conducted on an arms-length basis by an independent third party, taking into account the actual power harmonics, fault currents or load throwbacks as claimed by TSDISCOMS and also to arrive at a justifiable and reasonable charge based on actual cost / damage suffered by the Grid, if any, in providing such parallel operations to CPPs.



17. The prevailing parallel operation charge which is equivalent to the proposed GSC in other States is as follows:

Name of the State	Grid Support Charges Rs/KVA/Month
Madhya Pradesh	Rs.20/KVA/Month
Rajasthan	Rs.20/KVA/Month
Gujarat	Rs.26/KVA/Month
Tamilnadu	Rs.30/KVA/Month
J&K	Rs.16/- per kVA per month on the installed capacity of the CPP
Karnataka	Nil
Kerala	Nil
Odisha	Nil
West Bengal	Nil

The above utilities have proposed these rates after third party analysis.

From the above table it can be seen that the parallel operation charge or GSC in other States has either not been levied or has been worked out based on clear parameters of the costs incurred by the Grid and so are considered 475per KVA per month, proposed by TSDiscoms. The proposed levy has no basis and is grossly excessive, arbitrary, and so requires to be rejected or reduced substantially as validated by an independent third-party analysis.

18. It may please be noted that, before determination of GSC/POC, The Hon'ble Chhattisgarh State Electricity Regulatory Commission (CSERC) has assigned this responsibility to an independent third party M/s.Electrical Research & Development Association (ERDA) to study various system data and system parameters of representative selected CPPs. Accordingly ERDA has measured various system parameters like harmonics, unbalance current, plant load factor, load cycle, fault level calculations etc by measurement on selected CPPs and relevant substation and finally ERDA has suggested working out the parallel operation charges on sound technical basis taking into consideration advantages and disadvantages to both CPPs & CSEB and submitted its recommendation to CSERC. Accordingly CSERC determined Grid support charges Rs.21/KVA/Month. Similarly The Hon'ble OERC has also appointed an independent third party for system study before determination of GSC.
19. We request the Hon'ble Commission to engage a similar independent reputed third party to conduct a thorough analysis of system study and technical issues concerning power load throwbacks by CPPS/consuming industries, power harmonics in parallel operation of CPPs, size of the CPPs and



judiciously arrive at a reasonable charge as has been followed by other state utilities to arrive of the grid support charges/parallel operation charges. TS DISCOMS also should pursue this best practice to obtain an arm's length analysis and fair rates for all constituents.

20. The proposed levy of GSC at such a high rate will be a death knell for large process industries which depend upon captive power at reasonable cost. The proposed GSC will hit at the core viability of the principal industry resulting in closure of operations and in loss of direct and indirect employment aside from loss of revenue to the exchequer.
21. There is no mention of basis and methodology by DISCOMS for the proposed GSC of 50% of demand charges. If we consider the proposed GSC, a captive power generating plant having installed capacity of 100 MW, is needs to pay GSC of Rs.2.97 Crores per month and Rs.35.63 Crores per annum, forcing closure of the industry in Telangana.
22. In our case, the CPPs installed capacities are much higher when compared to our captive load to ensure higher availability for captive use. Since our installed and operating capacity of captive load is much lower than installed Capacity of Captive Power plant, it is required to connected with grid for export of surplus power through open access.
23. Since it needs to import startup power during the occasions of blackout, the grid connection is required.
24. The Grid connection is requited to import renewable energy .

### **P R A Y E R**

That, in view of the above, we pray that the Hon'ble Commission may be graciously pleased to;

- a) reject the proposal levy of Grid Support Charges as there is no such provision in the Statute/Electricity Act, whereas the STU /Transmission and Distribution Licensees are duty bound under Section 39 and 40 of the Electricity Act, 2003 and the National Electricity Policy, 2005 to provide connectivity to the CPPs like any generating station;
- b) Consider our foregoing objections, grant us a personal hearing and grant leave to adduce further evidential data in our support at the time of hearing;
- c) In the event the Hon'ble Commission holds the proposal of GSC is valid, within the powers and jurisdiction and are leviabile, it is prayed to engage an independent reputed third party to conduct a thorough system study and technical issues concerning power load throwbacks by CPPS/consuming industries, power



harmonics in parallel operation of CPPs, size of the CPPs and judiciously arrive at a reasonable charge as has been done by other state Commissions/governments TS DISCOMS also should pursue this best practice to obtain an arm's length analysis and fair rates for all constituents;

- d) To hold the levy till the third-party analysis is completed to the satisfaction of the Hon'ble TSERC;
- e) To permit us to submit further submission, if any, on such an independent study for consideration of the Hon'ble Commission either during the course of public hearing or separately
- f) It is also requested to permit us to submit further submission, if any, during the course of public hearing either by our representative or legal counsel.

**For Nava Bharat Ventures Limited**



**GRK Prasad**  
**Executive Director**

Hyderabad:  
28.01.2022