Government of India
Department of Telecommunication
Telecommunication Engineering Centre
FA Division
Gate No. 5, Khurshid Lal Bhawan, Janpath, New Delhi-110001.

File No.: **7-7/2023-FA/TEC** **Date: 23.07.2025**

Subject: Notice for invitation for joint Sub-DCC & MF meeting of FA division to be held on 30th July 2025 in respect of revision of GR on SMPS Based Power Plant (TEC 66110:2024)-reg.

A meeting of the Sub Development Coordination Committee (DCC) & Manufacturer's Forum (MF) of FA Division, TEC is scheduled on Wednesday, 30th July 2025, 11:30 am. Onwards to discuss the revision of GR (Generic requirement) on "SMPS Based Power Plant (TEC 66110:2024)". In this regard, TEC has also asked the comments / inputs from the stakeholders as per the notice uploaded in TEC website (https://tec.gov.in/consultations) in accordance with provisions in the Telecommunications (Framework to Notify Standards, Conformity Assessment and Certification) Rules, 2025.

2. The details of meeting link are as below:

- **Name :** Sub DCC & MF meeting of FA division for revision of GR, **TEC 66110:2024 on 'SMPS BASED POWER PLANTS".**
- **Meeting date & time : Wednesday, 30th July 2025, 11:30 a.m**
- **Meeting link: https://cdotmeet.cdot.in/vmeet/rooms/z0v-m4a-znr-ycy/join**

3. The electronic copy of existing GR 66110:2024 is enclosed for your reference, study and technical inputs/comments on technological advancements and changes in relevant standards.

4. Further, the inputs received from the OEMs/ Manufacturers till date are compiled and attached herewith at Annexure-B.

5. Members are requested to kindly provide their comments as per the attached format at **Annexure -A** on the various clauses of the enclosed existing GR and also on the proposals (attached at Annex-B), if any, in advance positively by **28thJuly 2025** to adgfa-tec-dot@gov.in with copy to rafa.tec-dot@govcontractor.in; dirfa.tec@gov.in and ddgfla.tec@gov.in.

6. Members are requested to kindly make it convenient to attend the meeting.

---Sd---
Deo Pratap
AD (FA), TEC

Encl: 1. Existing GR as above
2. Annexure-A and B as above

To
1. All Sub-DCC/Manufacturer Forum Members.
2. AD (IT), TEC for uploading the notice on TEC web site.

ANNEXURE-A

NAME OF .....(MEMBER/MANUFACTURER)

I. COMMENTS ON GR on SMPS Based Power Plant (TEC 66110:2024)-

Clause No.	Clause Description	Comments, if any	Remarks, if any

Annexure B

Clause No.	Clause Description	Comments from MF members
1.1.1.3.2	Small capacity Power plants systems: These type of power plants are envisaged to serve small telecom systems in rural and semi-urban areas. Battery back-up for these types of systems is 6 to 72 hours, depending on the electric supply conditions. This type of power plant may also be used with small telecom systems such as mobile base stations etc. in the urban and metros areas. SMPS power plants based on 6.25A, 12.5A, 25A and 50A basic modules are envisaged for these applications. They all use single phase supply except for 50A basic module, which may be with single phase or three phase supply"	M/s Greenpole: Proposed to add 83A single phase module to increase power density & it will be cost effective. Eg. 450A systems need 9Nosx50A whereas if we use 83A we can go with 6Nos.x83A
.1.2.2.5.4	SMPS Management (Optional) The purchaser may decide the requirements for optional SMPS Management features like i. Energy saving Management, ii. DG Efficiency & Fuel Saving Management, iii. Battery Efficiency & Management, iv. Rectifier Control Efficiency Management, etc. TEC Standard No.TEC 66110:2024 15 v. Data Logging to all the SMPS parameters and alarms which may be downloadable in excel or any new readable format. vi. Ability to calculate and display run hrs. SMPS on EB, Battery, DG (if DI provided) vii. Redundancy supervision to calculate no.of redundant and no. of lacking rectifiers Based upon load current and battery AH setting. viii. USB port or any other secured	M/s Greenpole: We propose additional function "Peak discharge" management which can optimise the electricity bill consumption for good grid & good grid with solar

	mode to download log file in pen drive, other authorised storage devices, etc.	
1.1.2.2.5.5	Battery path Current Limiting Circuit :. In Auto Mode the current in each battery path (For VRLA type battery) shall be settable as per the battery capacity so that the battery path current is kept at 10% of battery AH capacity. When Li-ion battery selected setting the current in each battery path should be settable as per the battery capacity so that battery path current is kept at 10% to 50% of battery AH capacity and actual battery path current will be decided by the purchaser. Further, purchaser will give the capacity of the battery to be used for this purpose. For the type approval the manufacturer shall demonstrate the facility and undertake to make provision as per order	M/s Greenpole: We propose Source Based Controller .ie. Battery charging for Mains & DG mode separately which helps in optimize the DG capacity & fuel efficiency. In this mode Grid can charge battery with higher current rating & in DG mode lesser battery charging to save fuel & life
1.2.11	Documentation Technical literature in English and Hindi with complete layout, detailed block schematic and circuit diagrams of its assemblies with test voltages at different test points of the units shall be provided. A soft copy as well as a hard copy of the above shall also be provided. All aspects of installation, operation, maintenance, trouble shooting and repair shall be covered in this manual. The manual shall also include the following	M/s Greenpole: We propose to provide installation, Operation & Maintenance manual paper less in QR code format so individual can have access documents through server. Viewer can view the documents in clear visibility and images and diagrams in color Mode We provide additional features listed below 1. Loss of backup time 2. Source based priority Management 3. Grid power usage blocking 4. to utilize more solar generation 5. System Multi Language support 6. PLC 7. Mixed battery switching – intelligence DC/DC switching mode to operate the battery-1 & Battery-N Boost & Float mode in

		vice versa M/s Delta: Technical literature in English with complete layout, detailed block schematic and circuit diagrams of its assemblies shall be provided. All aspects of installation, operation, maintenance, trouble shooting and replacement shall be covered in this manual. This manual can be provided as a soft copy or QR code and/ or hard copy as specified by the purchaser. Label or suitable arrangement for address and telephone numbers of Maintenance centre shall also be provided.
1.2.18	Safety Requirements: The equipment shall conform to IS 13252 part 1:(2010) "information technology Equipment Safety Part 1: General Requirements {equivalent to IEC 62368 } and IS 10437(1986) "Safety requirements for radio transmitting equipments" equivalent to IEC 60215.	M/s Delta: Safety Requirements: The equipment shall conform to IEC 62368 safety standard
1.2.3	Rack Configuration: Rack is composed of following units, accommodated in 19" (482.6 mm) Sub-rack:	M/s Delta: Rack Configuration: Rack is composed of following units,
1.2.7.1	Bus-bar Riser height, wherever applicable, shall be 250 mm for both exchange and battery. Bus-bar Riser should be used for higher capacity of exchange load and battery more than 450 Amp. There shall be no bus-bar in outdoor units.	M/s Delta: Bus-bar Riser height, wherever applicable, shall be 250 mm for both exchange and battery. Bus-bar Riser can be used for higher capacity of exchange load and battery more than 450 Amp, if specified by purchaser. There shall be no bus-bar in outdoor units.
1.2.7	Bus Bars: Tinned Bus-bars or tinned High conductivity electrolytic copper strips with purity of 99.90% (min) as per BIS 613 latest issue, be able to withstand maximum Load current. The Bus-bar shall be capable to carry current density of 2 Amps/mm square but shall not be less than 25mmX5mm in any case. Nuts & bolts shall be of stainless steel with tinned copper washers only. The size of bus-bars chosen for battery and load path	M/s Delta: Boundation to use minimum 25mm x 5mm busbar requirement should be removed from the clause

	shall be capable to take care of the current of maximum power plant capacity for which it is designed. The Bus-bar/cable size shall also ensure that the voltage drop between the output of the farthest FR/FC module riser and also between battery and exchange riser, as per the layout drawing shall be less than 500mV. The tinning shall be in compliance of IS 1359: 1992 and its thickness shall be 10 um (minimum).	
1.3.4	58. Battery Bank 1 to 5 - Cell Fail 1, 2, 3 …. to 24	M/s Delta: Battery Bank 1 to 5 - Any Cell Fail 1, 2, 3 …. to 24
1.2.12.1.4	Component Approval: The components used in SMPS Power Plant, shall be certified by recognised National/International Institutions and approved by CACT wing of BSNL. Components shall neither be combustible nor support combustion. NABL approved test reports are also be acceptable as an alternative to approval of CACT wing of BSNL.	M/s Delta: Component Approval: The components used in SMPS Power Plant, shall be certified by recognised National/International Institutions and approved by CACT wing of BSNL. Components shall neither be combustible nor support combustion. NABL approved test reports are also be acceptable as an alternative to approval of CACT wing of BSNL. CACT/NABL approved test report is require for following components: 1. AC MCB's 2. Battery Fuse (if available in system) 3. DC Contactor 4. AC Contactor (if available in system) 5. SPD Stage II (Class C)
1.1.2.2.9.8.2	Total Current Harmonic Distortion: The total harmonic distortion shall be limited as per EN 61000-3-2 Ed.2:2000. The total current harmonic distortion contributed by the unit at the input shall not exceed 10% for input voltage range 90V-300V for single phase units and 320V to 480V for three phase systems; for load between 50 to 100% of the rated capacity.	M/s Delta: Total Current Harmonic Distortion: The total harmonic distortion shall be limited as per EN 61000-3-2 Ed.2:2000. The total current harmonic distortion contributed by the unit at the input shall not exceed 10% for input voltage range 120V-290V for single phase units and 374V to 457V for three phase systems; for load between 50 to 100% of the rated capacity.
General Comment	----------	M/s Vertiv TEC to consider deferring any revision of TEC 66110:2024 for at least the next three years.