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भारत संचार निगम लिमिटेड
(भारत सरकार का उपक्रम)
BHARAT SANCHAR NIGAM LIMITED
(A Govt. of India Enterprise)

No.: 7-1/2013-NWO-CFA/MSE (Ch. II)

Dated: 27.03.2014

To,

**The Chief General Managers,
Telecom Circles/Telecom Districts/Maintenance Regions
BSNL**

Sub.:- Revision of specifications on SMPS power plant regarding.

Power Plant is one of the consumable items of BSNL Telecom network and it was felt to review the specifications of SMPS power plants as per its actual need of the Telecom site. The power plant (which is required for replacement of life-expired/faulty power plant) should be according to the backup time required for each existing/new telecom site. The management committee of BSNL Board deliberated and approved consolidated modified GR clauses in the existing TEC GR No TEC/GR/FLA/SMP-001/06/June.2010 proposed by the review committee regarding GRs of Power plant as mentioned below.

1. Small capacity Power plants systems for serving small telecom systems in rural and semi-urban areas with ultimate capacity of less than 150A (single phase) based on 25A/50A single phase module are envisaged and these power plants shall operate on single or three phase / 4 wire A.C input power distribution.

The power plants with ultimate capacity 150A/300A/450A based on 50A basic modules shall operate on three phase / 4 wire A.C input power distribution. Higher rated modules in place of 50 A basic modules (60A/75A) is also permissible, but counting of modules will be as per ultimate capacity fixed for 50A basic modules (i.e., 150A/300A/450A).

2. Large capacity Power plants systems for large or very large telecom systems with ultimate capacity of 600A/1000A/1500A and above are envisaged. Battery back-up for these systems may vary as per specific field requirements. SMPS power plants based on 100A basic modules are envisaged for 600A/1000A/1500A and 100/200A basic modules for above 1500 A for these application. All these power plants use three phase supply.

3. Power De-rating:

(a) Power de-rating for Single Phase FR/FC Modules: Power plant shall deliver 60% of rated capacity for input operating of 120 to 185V and 100% of rated capacity for input operating range of 185 to 300V. Power Plant shall cut off below 120V.

(b) Power de-rating in case of SMPS power plant operating on three phase with 100A FR/FC Module, shall be able to operate on two phase with output power de-rating of at least 50%.

4. Neutral path current in case of single phase FR/FC modules in each phase of three phase distribution shall not exceed the limit set by State Electricity Board / Other Regulatory Authority.

5. While calculating the composition of a particular power plant, power plant ultimate capacity/SMPS modem rating, the sum total of the load current and charging current of the battery is considered. In actual operation the battery is fully charged, the power plant will supply to only exchange load. Under this condition keeping all the modules "ON" will results in poor overall efficiency, hence by selecting to switch off the extra modules will improve the overall power consumption and also result in higher reliability and life time of the modules. This is popularly known as "SLEEP MODE".

6. SMPS Power Plant System Ultimate Capacity of the following configurations may be deployed in BSNL.

(a) SMPS Power Plant with Single Phase 25A/50A FR/FC Modules with single phase A.C. Supply.

(b) SMPS Power Plant with Single Phase 50A FR/FC Modules having three phase distribution: Power Plant categorized in to three ratings:

A. Power Plant with Ultimate Capacity 150A (2+1) configuration (with R/Y/B=1+1+1), housed in a single rack.

B. Power Plant with Ultimate Capacity 300A (5+1) configuration (with R/Y/B=2+2+2), housed in a single rack.

C. Power Plant with Ultimate Capacity 450A (8+1) configuration (with R/Y/B=3+3+3), housed in a single rack.

Higher rated modules in place of 50A basic modules (60A/75A) are also permitted. But counting of modules will be as per the ultimate capacity fixed for 50A basic module (i.e. 150A/300A/450A).

(c) SMPS Power Plant with Three Phase 100A FR/FC Modules: Power Plant categorized in to three ratings:

A. Power Plant with ultimate capacity 600A (in Single Rack)

B. Power Plant with ultimate capacity 1000A (in Single Rack)

C. Power Plant with ultimate capacity 1500A (can be in two Racks with Main Rack capacity up to 1000A & Extension Rack capacity up to 500A).

(d) SMPS Power Plant with Three Phase 200A FR/FC Modules with capacity more than 1600 A.

The BSNL approved new specification on SMPS power plant Issue I dated 1st March 2014 is enclosed for necessary action.

M. Meena
27/3
(Mukesh Meena)
DGM (NWO-I-CFA)

Enclosed: As above.

Copy to:

1. Director (C.F.A) BSNL |
2. Director (CM), BSNL | for information please.
3. Director (EB), BSNL |
4. Sr. GM (NWO-CM) for necessary action please.