

CHAPTER : 13**MISCELLANEOUS****13.1 Other Codes and Regulations**

User(s) shall ensure that new buildings, structures, additions, modifications and any other construction projects keep the minimum clearances required from existing supply lines of the licensee. These minimum clearances are specified in the Indian Electricity Rules, 1956 and the Safety Code as may be notified by the Commission.

13.2 Non-Compliance & Derogation

13.2.1 If any user is not in a position to comply, or fails to comply, with any of the provision(s) of the Grid code, it shall inform STU without delay of the reason for its non-compliance and shall take remedy for its non-compliance promptly.

13.2.2 Wrong declaration of capacity, non compliance of SLDC's load dispatch instructions, non-compliance of SLDC's instructions for 'backing down without adequate reasons, non-furnishing of data etc. shall constitute non-compliance of the Grid Code, which shall be subject to penalty as may be decided by the Commission.

13.2.3 Repeated failure to comply with the Grid Code may lead to disconnection of the user(s).

13.2.4 Derogation, if any, for any particular section or chapter of this Grid Code shall be with the permission of the Commission and for a specified time. Derogation of any requirement of the Grid Code shall be an exception and not the norm, and will be allowed only when it is not possible, and not just difficult or inconvenient, for the user to comply in the required time. Failure to comply with time period allowed for derogation by any user shall carry a penalty.

13.2 Service of Notice

Any letter, order or document addressed by the licensee to the user shall be deemed to be duly given, if served in writing and delivered by hand at, or sent by post/ courier, to the user address specified in the consumer's application or in the agreement with the user if entered into or as subsequently notified to the licensee. In case there is no person on the premises to whom the notice can with reasonable diligence be delivered, the notice may be served by affixing it on some conspicuous part of the premises.

All communications to the licensee shall be addressed to:

The Secretary of the licensee's company at the corporate office of the licensee or to any other officer authorised or designated in this behalf.

13.3 Unforeseen Circumstances

If any circumstances not envisaged in the provisions of the Grid Code, should arise, the licensee shall, to the extent reasonably practicable in the circumstances, consult promptly and in good faith, all affected parties in an effort to reach an agreement as to what should be done. If an agreement between the licensee and user cannot be reached in the time available, the licensee shall determine it in the manner best to its ability.

Wherever the licensee makes such a determination, it shall do so having regard, wherever possible, to the views expressed by the affected parties and, in any event, to what is reasonable in the circumstances. Each party shall comply with all instructions given to it by the licensee following such a determination, provided that the instructions are consistent with the prevailing Codes and Regulations. The licensee shall promptly refer all such unforeseen circumstances, and any such determination to the Commission.

13.4 Interpretation:

These conditions shall be read and construed as being subject, in all respects, to the provisions of the Electricity Act, 2003, the Indian Electricity Rules, 1956, Indian Electricity Grid Code, 2007 as amended from time to time and the Rules made therein and to the provisions of any other law relating to the transmission of electricity for the time being in force; and nothing contained in this Code shall abridge or prejudice the rights of the licensee and the consumer under any Central Act or State Act or Rules made there under.

In case of any dispute regarding the meaning or scope or interpretation of this Code, the interpretation of the Commission shall be final and binding on all concerned.

13.5 Power to remove difficulties:

If any difficulty arises in giving effect to any of the provisions of this, the matter may be referred to the Commission who after consulting the parties affected, where considered necessary, may pass any general or special order, not inconsistent with the provisions of the Act or any other enactment relating to supply of electricity for the time being in force, which appears necessary or expedient, for the purpose of removing the difficulty.

13.6 Jurisdiction of Court:

All proceedings arising out of this Code and the agreement made there under shall be filed only in the Court under whose jurisdiction the agreement was executed.

13.7 Savings

Nothing in this Code shall be deemed to limit or otherwise affect the inherent power of the Commission to make such orders as may be necessary to meet the ends of justice or to prevent abuses of the process of the Commission.

Nothing in this Code shall bar the Commission from adopting in conformity with the provisions of the Act, a procedure, which is at variance with any of the provisions of this Grid Code, if the Commission, in view of the special circumstances of a matter or class of matters and for reasons to be recorded in writing, deems it necessary or expedient for dealing with such a matter or class of matters.

Nothing in this Code shall, expressly or impliedly, bar the Commission dealing with any matter or exercising any power under the Act for which no provision has been made in the Grid Code, and the Commission may deal with such matters, powers and functions in a manner it thinks fit.

Note: In case of any difference in the interpretation or understanding of the provisions of the Hindi version of these Regulations with those of the English version (the original version), the latter will prevail and in case of any dispute in this regard, the decision of the Commission shall be final and binding.

By order of the Commission,
N.K. Rupwani, Secretary.

Annexure A

PLANNING DATA REQUIREMENTS (CLAUSE 3.3.2)

PART-I- GENERATION

(To be furnished by the Generating Company to STU)

A-1 Standard Planning Data (Generation)

A.1.1 THERMAL GENERAL

1. Site	Furnish location map (schematic) showing roads, Railway lines, transmission lines, rivers and reservoirs if any.
2. Approximate period of construction	
3. Annual Generation in Million KWH	

II CONNECTION

1. Connection point / interface point	Furnish single line diagram of the proposed connection with the transmission system with clear indication of possibility for right of way for unobstructed outlet
2. Step up voltage for connection kV	

III. STATION CAPACITY:

1. Total Generating Station Capacity (MW)	
2. No. of Units and Unit size MW.	State whether development will be carried out in phases and if so, furnish details

IV. GENERATING UNIT DATA:

1. Steam Generating Unit	
Type, capacity, steam pressure, steam temperature etc-	
2. Steam turbine	
Type, Capacity	
3. Generator	
(a) Make and Type	
(b) Rating (MVA)	
(c) Terminal Voltage (kV)	
(d) Rated Power Factor	
(e) Reactive Power capability (MVA) in the range 0.95 leading and 0.85 lagging.	
(f) Short Circuit Ratio	
(g) Direct axis transient reactance (% on MVA rating)	
(h) Direct axis sub-transient reactance (% on MVA rating)	
(i) Auxiliary Power requirement	
(j) MW and MVA Capability curve	
2. Generator Transformer	
(a) Type	
(b) Rated Capacity (MVA)	
(c) Voltage Ratio (HV/LV)	
(d) Tap change range (+% to -%)	
(e) Percentage Impedance (Positive Sequence at Full load).	

A.1.2 DETAILED PLANNING DATA (GENERATION) THERMAL GENERATING STATIONS:

I GENERAL:

- a. Name of Generating Station;
- b. No. of capacity of Generating Units (MW);
- c. Single line diagram of Generating Station and switchyard
- d. Relaying and metering diagram
- e. Neutral Grounding of Generating Units
- f. Excitation control
- g. Earthing arrangements with earth resistance values
- h. Communication – Details of PLCC and other communication equipment installed.

II PROTECTION AND METERING:

1. Full description including settings for all relays and protection systems installed on the Generating Unit, Generating Unit Transformers, Auxiliary Transformer and electrical motor of major equipment viz. boiler feed pump, ID fans, condensate extraction pump etc.
2. Full description including settings for all relays installed on all outgoing feeders from Generating Station switchyard, tie circuit breakers, incoming circuit breakers.
3. Full description of inter-tripping of circuit breakers at connection (point(s) / Interface points (s) with the transmission system.
4. Most probable fault clearance time for electrical faults on the user's system.
5. Full description of operational and commercial metering schemes.
6. Breaker operating time counting from initiation of protective relay to the opening of breaker.

III SWITCHYARD:

1. In relation to Interconnecting Transformers between EHV/HV transmission system and the Generator Transformer Voltage System:
 - (a) Rated MVA
 - (b) Voltage Ratio
 - (c) Vector Group
 - (d) Positive sequence reactance (Maximum, minimum, normal tap (% on MVA)
 - (e) Positive sequence resistance, (Maximum, minimum, normal tap (% on MVA)
 - (f) Zero sequence reactance (% on MVA)
 - (g) Tap changer range (+% to -%) and steps
 - (h) Type of tap changer (OFF/ON)
 - (i) Details of reactors, and other circuits connected to tertiary winding of ICT:
 - (j) Method of grounding.
2. In relation to switchgear including circuit breakers, isolators on all circuits connected to the points of connection:
 - (a) Rated Voltage (kV)
 - (b) Type of Breaker (MOCB/ABCD/SF₆---
 - (c) Rated short circuit breaking current (kA) 3 phase
 - (d) Rated short circuit breaking current (kA) 1 phase
 - (e) Rated short circuit making current (kA) 3 phase
 - (f) Rated short circuit making current (kA) 1 phase
 - (g) Provisions of auto reclosing with details
 - (h) Details of instrument transformers.
3. Lightning arresters, technical data.
4. Communication – Details of PLCC and other communication equipment installed at connection point(s) / interface point(s).
5. Basic insulation level (kv):
 - (a) Bus bar
 - (b) Switchgear
 - (c) Transformer bushings
 - (d) Transformer windings

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IV GENERATING UNITS:**A. PARAMETERS OF GENERATING UNITS:**

1. Rated terminal voltage (kV)
2. Rated MVA
3. Rated MW
4. Inertia constant H(MW Sec./MVA) of Generator
5. Short circuit ratio
6. Direct axis synchronous reactance(% on MVA) (Both unsaturated and saturated)
7. Direct axis transient reactance(% on MVA) (Both unsaturated and saturated)
8. Direct axis sub-transient reactance(% on MVA) (Both unsaturated and saturated)
9. Quadrature axis synchronous reactance(% on MVA) (Both unsaturated and saturated)
10. Quadrature axis transient reactance(% on MVA) (Both unsaturated and saturated)
11. Quadrature axis sub-transient reactance(% on MVA) (Both unsaturated and saturated)
12. Direct axis transient open circuit time constant (Sec) $T'd_0$
13. Direct axis sub-transient open circuit time constant (Sec) $T'd_0$
14. Quadrature axis transient open circuit time constant (Sec) $T'd_0$
15. Quadrature axis sub-transient open circuit time constant (Sec) $T'd_0$
16. Stator resistance (Ohm)
17. Stator leakage reactance (Ohm) T_a
18. Stator time constant (Sec)
19. Rated field current (A)
20. Open circuit saturation characteristic for various terminal voltages giving the exciting current to achieve the same.
21. Generator Capability Curve
22. Rated stator current (A)
23. Phase connection
24. Number of terminals brought out
25. Rated speed(rpm)
26. Rated frequency (Hz.)
27. Efficiency at MCR condition (percent)
28. Negative sequence current capability (I^2T)
29. Capacitance of generator stator winding to ground (microF/ph)
30. DC Resistance of rotor at 20° C (in ohm)
31. Zero sequence reactance X_0 (Percentage)
32. Negative sequence reactance X_2 (Percentage)
33. Negative sequence reactance R_2 (Percentage)
34. Sub-Transient S-C time constant (in second)
 - a. Direct axis $T''d$
 - b. Quadrature axis $T''q$
35. Transient S-C time constant (in second)
 - a. Direct axis $T''d$
 - b. Quadrature axis $T''q$
36. Machine saturation at 1.0 pu voltage in p.u.
37. Machine saturation at 1.2 pu voltage in pu
38. Percentage regulation
39. Short circuit characteristics curves.

B. PARAMETERS OF EXCITATION CONTROL SYSTEM:

1. Type of Excitation
2. Maximum Field voltage
3. Minimum Field voltage
4. Rated Field voltage
5. Gain factor
6. Feed back strength
7. Time constant for control amplifier

8. Time constant for Exciter
9. Time constant for Feed Back
10. Output voltage of control amplifier
11. Maximum output voltage of control amplifier
12. Minimum output voltage of control amplifier
13. Details of excitation loop in block diagrams showing transfer functions of individual elements using IEEE symbols along with set values
14. Dynamic characteristics of over – excitation Limiter
15. Dynamic characteristics of under – excitation Limiter
16. Exciter IEEE model / Type No.
17. Exciter response time.

C. PARAMETERS OF GOVERNOR / TURBINE:

1. Governor average gain (MW/Hz)
2. Speeder motor setting range
3. Time constant of steam or fuel Governor valve
4. Governor valve opening limits
5. Governor valve rate limits
6. Governor valve rate limits
7. Time constant of Turbine (HP, IP, LP)
8. Governor block diagram showing transfer functions of individual elements using IEEE symbols along with set values
9. Type of governor, whether IEEE standard governor used
10. Regulation and droop
11. Fraction of total power generated HP, IP, LP turbine.
12. Maximum velocity limit HP, IP, LP turbine
13. Minimum velocity limit HP, IP, LP turbine.

D. OPERATIONAL PARAMETERS:

1. Min. notice required for synchronizing a Generating Unit for De-synchronization.
2. Min. time between synchronizing different Generating Units in a Generating Station.
3. The minimum block load requirements on synchronizing
4. Time required for synchronizing a Generating Unit for the following conditions:
 - (a) Hot
 - (b) Warm
 - (c) Cold
5. Maximum Generating Unit loading rate for the following conditions:
 - (a) Hot
 - (b) Warm
 - (c) Cold
6. Minimum load without oil support (MW)

V. PLANT PERFORMANCE:

1. Daily Demand Profile (Last Year)	Half hourly integrated demand through out the day
2. Units Generated (Million KWH)	
3. Units consumed in Auxiliaries (Million KWH)	
4. Units supplied from system to Auxiliary Load	
5. Seasonal Generation	

A.1.3 HYDRO ELECTRIC GENERAL:

1. Site	Furnish location map (schematic) showing roads, Railway lines, transmission lines, rivers and reservoirs if any.
Whether storage type, run of river type	
Full reservoir level	
Tail race level	
Design head	
Minimum draw down level	
Reservoir level v/s energy poetential curve	
2. Approximate period of construction	
3. Annual Generation in Million KWH	

II. CONNECTION:

(AS APPLICABLE TO THERMAL GENERATING STATIONS MENTIONED ABOVE)

STATION CAPACITY:

(AS APPLICABLE TO THERMAL GENERATING STATIONS MENTIONED ABOVE)

IV. GENERATION UNIT DATA:

1. Operating Head	
a) Maximum	
b) Minimum	
c) Average	
Hydro Unit	
a) Capability to operate as synchronous condenser	
b) Water head versus discharge curve (at full and part load)	
c) Power requirement or water discharge while operating as synchronous condensor	
2. Turbine	
Type, Capacity	
Generator	
(a) Make and Type	
(b) Rating (MVA)	
(c) Terminal Voltage (kV)	
(d) Rated Power Factor	
(e) Reactive Power capability (MVAR) in the range 0.95 leading and 0.85 lagging.	
(f) Short Circuit Ratio	
(g) Direct axis transient reactance (% on MVA rating)	
(h) Direct axis sub-transient reactance (% on MVA rating)	
(i) Auxilliary Power requirement	
2. Generator Transformer	
(a) Type	
(b) Rated Capacity (MVA)	
(c) Voltage Ratio (HV/LV)	
(d) Tap change range (+% to -%)	
(e) Percentage Impedance (Positive Sequence at Full load).	

A.1.4 HYDROELECTRIC STATIONS:**I. GENERAL:**

1. Name of Generating Station
2. No. and capacity of units (MW)
3. Expected level of generation (MU)
4. Period of generation (in months) per year
5. Whether the plant is based on water released from dam/canal for irrigation purposes
6. Rating of all major equipments.
7. Single line diagram of Generating Station and switchyard
8. Relaying and metering diagram
9. Neutral grounding of generator
10. Excitation control
11. Earthing arrangements with earth resistance values
12. Communication - Details of PLCC and other communication equipment installed.

II. PROTECTION:

(AS APPLICABLE TO THERMAL GENERATING STATIONS MENTIONED ABOVE)

III. SWITCH YARD:

(AS APPLICABLE TO THERMAL GENERATING STATIONS MENTIONED ABOVE)

IV. GENERATION UNITS:**A. PARAMETERS OF GENERATING UNITS:**

(AS APPLICABLE TO THERMAL GENERATING STATION MENTIONED ABOVE)

B. PARAMETERS OF EXCITATION CONTROL SYSTEM:

(AS APPLICABLE TO THERMAL GENERATING STATION MENTIONED ABOVE)

C. PARAMETERS OF GOVERNOR / TURBINE:

(AS APPLICABLE TO THERMAL GENERATING STATION MENTIONED ABOVE)

D. OPERATIONAL PARAMETERS:

1. Minimum notice required for synchronizing a Generating Unit for De-synchronization.
2. Minimum time between synchronizing different Generating Units in a Generating Station
3. Minimum block load requirements of Synchronizing.

A1.5 FOR THERMAL GENERATING STATIONS, if desired by STU:**A. CONNECTION:**

1. Report of studies of parallel operation with transmission system:
 - (a) Load flow studies
 - (b) Stability studies
 - (c) Short Circuit studies
2. Proposed connection with transmission system
 - (a) Voltage
 - (b) No. of circuits
 - (c) Connection point (s) / interface point (s)

II. HYDROELECTRIC GENERATING STATIONS:

(AS APPLICABLE TO THERMAL GENERATING STATIONS MENTIONED ABOVE)

PART II – DISTRIBUTION**(To be furnished by the Distribution Company to STU)****B-1 Standard Planning Data Distribution****I. GENERAL:**

1. Single Line Diagram : Licensee-wise upto 33kV Substations
2. Consumer Data : Furnish category wise number of consumers, their connected Loads to the best judgment of the distribution licensee.
3. Reference to are officers presently incharge of the distribution.

II. CONNECTION:

1. Connection points/interface points: Furnish single line diagram showing connection points / interface points.
2. Voltage of supply at connection points/interface points:
3. Names of grid Sub-station feeding the connection pints / interface points:

III. LINES AND SUB-STATIONS:

1. Line Data: Furnish length of line and voltages (EHV level)
2. Sub-station Data: Furnish transformer details of 220/132kV, 132/33kV, 33/11kV, Sub-stations, capacitor installations.

IV LOADS

1. Loads drawn at connection points/ interface points:	If the distribution licensee receive power at a number of connection points in a compact area, which are interconnected in a ring, then such distribution licensee shall forward the overall load drawn for overall Area of Supply as well as at each connection point with the variation or tolerance as mutually discussed and agreed upon with the STU
2. Details of loads fed at EHV, if any	Give name of consumer, voltage of supply, contract demand and name of grid Sub-station from which the line is drawn, length of EHT line from grid Sub-station to consumer's Premises.

V. DEMAND DATA (FOR ALL LOADS 5 MW AND ABOVE):

1. Type of Load & Rating in HP or KW	State whether furnace loads, rolling mills, traction loads, other industrial loads, pumping loads etc.
2. Rated voltage:	
3. Electrical loading of equipment	State number and size of motors, rating or arc furnaces/induction furnace, types of drive and control arrangements.
4. Sensitivity of load to voltage and Frequency of supply:	
5. Maximum harmonic content of Load:	
6. Average and maximum phase unbalance of Load:	

7. Nearest Substation from which load is to be fed:	
8. Location map to scale:	Map shall show the location of load with reference to lines and sub-stations in the vicinity.

VI LOAD FORECAST DATA:

1. Peak load for connection point / interface point as well as peak load and energy forecast of Area of Supply for each of the succeeding 10 years.
2. Details of methodology and assumptions on which forecasts are based
3. Details of load 5MW and above:
 - a. Name of prospective consumer
 - b. Phasing of load.

B-2 DETAILED PLANNING DATA (Distribution)

I. GENERAL:

1. Schematic Single Line Diagram of Distribution System (showing distribution lines from connection point / interface points with transmission system 220kV/ 132kV, 132/33kV, & 33/11 kV Substations, consumer bus if fed directly from transmission system).
2. Numbering and nomenclature of lines and substations (Identified with feeding grid Substations of the transmission system and concerned 220kV/132kV, 132/33kV, and 33/11kV substation).

II. CONNECTION:

1. Connection point / interface points (Furnish details of existing arrangement of connection).
2. Details of metering of connection points / interface points.

B.2 DETAILED PLANNING DATA (Distribution)
(For submission on request by STU)

I. CONNECTION:

- Connection points/ interface points as applied for:
- (a) New
 - (b) Upgrading existing connection
2. Changes in metering at connection points / interface points.

II. LOADS:

1. Details of major loads of 1 MW and above to be contracted for next ten years.

Annexure - B.

DETAILED TRANSMISSION SYSTEM DATA (CLAUSE 3.3.3)
 (To be furnished to the User on request by STU/ Transmission Licensee)

B-1 Standard Planning Data (Transmission)

1. Name of the line: (Indicating Generating Stations and Substations to be connected)
2. Voltage of line (kV):
3. No. of circuits:
4. Route length (CKM):
5. Conductor sizes:
6. Line parameters (PU on 100 MVA base or ohmic values)

Resistance/KM
Inductive Reactance/KM
Suceptance/KM
7. Approximate power flow MW & MVAr:
8. Line Route (Topographic Sheets)
9. Purpose of connection:

Reference to scheme, wheeling to other States etc.
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10. Approximate period of construction:

B-2 DETAILED SYSTEM DATA (Transmission):**I. GENERAL:**

- 1) Single line diagram of the transmission system upto 33kV bus at grid sub-station.
- 2) Name of substation
- 3) Generation Station connected
- 4) Number and length of circuits
- 5) Interconnecting Transformers
- 6) Substation bus layouts
- 7) Power transformers
- 8) Reactive compensation equipment
 - (a) The details of capacitors installed
 - (b) Additional capacitors to be commissioned along with additional loads.
- 9) Lightning arresters
- 10) Bus and / or line reactors

II SUB-STATION LAYOUT DIAGRAMS SHOWING:

1. Bus bar layouts
2. Electrical circuitry, lines, cables, transformers, switchgear etc.
3. Phasing arrangements
4. Earthing arrangements
5. Switching facilities and interlocking arrangements
6. Operating voltages
7. Numbering and nomenclature
 - (a) Transformers
 - (b) Circuits
 - (c) Circuit breakers
 - (d) Isolating switches

III LINE PARAMETERS: (FOR ALL CIRCUITS)

1. Designation of line
2. Length of line (KM)
3. No. of circuits, size and type of conductor, thermal rating

4. Per circuit values

- | | |
|--|-----------|
| a. Operating voltage (kV) | |
| b. Positive phase sequence reactance | – ohms/KM |
| c. Positive phase sequence resistance | – ohms/KM |
| d. Positive phase sequence susceptance | – ohms/KM |
| e. Zero phase sequence reactance | ± ohms/KM |
| f. Zero phase sequence resistance | – ohms/KM |
| g. Zero phase sequence susceptance | – ohms/KM |

**IV. TRANSFORMER PARAMETERS:
(FOR ALL TRANSFORMERS SUB-STATION-WISE)**

1. Rated MVA
2. Voltage ratio
3. Vector group
4. Positive sequence reactance on rated MVA base (Max: Min & normal)
5. Positive sequence resistance on rated MVA base(max. min. & normal)
6. Zero sequence reactance on rated MVA base
7. Tap change range (+% to -%) and steps
8. Details of tap changer (OFF/ON)
9. Neutral grounding transformer/resistor values
10. % Impedance (Max./Min/Normal Tap)

V. EQUIPMENT DETAILS: (FOR ALL SUB-STATIONS):

1. Circuit breakers
2. Isolating switches
3. Current transformers
4. potential transformers
5. Lightning arresters
6. Earthing switches

VI. RELAYING AND METERING:

1. Relay protection installed for all transformers and feeders along with their settings and level, of coordination with other uses.
2. Metering Details.

VII. SYSTEM STUDIES:

1. Load flow studies (Peak and lean load for maximum Hydro and maximum Thermal Generation).
2. Transient stability studies for 3 Phase fault in critical lines, and single pole reclosing for 400 kV lines and critical 220kV lines.
3. Dynamic stability studies
4. Short circuit studies (3 phase and single phase to earth)
5. Transmission and distribution losses in the system.

VIII. DEMAND DATA: (FOR ALL SUB-STATIONS)

1. Demand Profile (Peak and off Peak load)
 - (b) Forecast for next 5 years.

IX. REACTIVE COMPENSATION EQUIPMENT:

1. Type of equipment (fixed or variable)
2. Capacities and/or inductive rating (Voltage and MVAR) or its operating range.
3. Details of control
4. Connection point/ interface point to the system.

B.3 DETAILED PLANNING DATA (Transmission):**I. CONNECTION:-**

1. Single Line Diagram showing position of connection.
2. Sub-station layout diagram.
 - (a) New
 - (b) Addition and alteration
3. Revised system studies with changed parameters
4. Connection point / interface point:
 - a. Voltage
 - b. Length of circuit
 - c. Circuit parameters
 - d. PLCC facilities
 - e. Relaying with inter tripping arrangements to inter trip system breaker at connection point / interface point to isolate on fault
 - f. Metering at connection point / interface point
 - g. Other communication facility

Annexure – C

SITE RESPONSIBILITY SCHEDULE (CLAUSE 4.7.2)

Name of the Connecting Station / Substation

Telephone No.

Fax No.

Permanent Address

Item of Plant or Apparatus KV Switch Yard*	Plant Owner	Responsibility for				Remarks
Feeders						
Generating Units						

Shall include details of the following:

- i. Bus bars
- j. Circuit breakers
- k. Isolator
- l. Bypass facilities
- m. Earthing switches
- n. Overhead line entry / gantry
- o. Overhead line tapping
- p. Cable and cable sealing ends
- q. Generating Unit
- r. Generating Unit Auxiliary Transformers including Low Voltage Circuit Breakers
- s. Station Service Transformers including Low Voltage Circuit Breakers
- t. Capacitors including Synchronous Condensers
- u. Series or shut reactors
- v. Tertiary windings
- w. Earthing and Auxiliary Transformers
- x. Three phase voltage transformers
- y. Single phase voltage transformers and phase identity
- z. Surge arresters
- aa. Neutral earthing arrangement on HV Plant
- bb. Current transformers
- cc. Potential transformer
- dd. Equipment related to PLCC and SCADA.

Annexure - D

INCIDENT REPORTING (CLAUSE 11.1.2)

FIRST REPORT

Date.....

Time

1. Date and time of incident
2. Location of incident
3. Type of incident
4. System parameters before the incident (Voltage, Frequency, Generation, etc.)
5. System parameters after the incident
6. Network configuration before the incident
7. Relay indications received and performance of protection
8. Damage to equipment
9. Supplies interrupted and duration, if applicable.
10. Amount of Generation lost, if applicable.
11. Estimate of time to return service.
12. Cause of incident
13. Any other relevant information and remedial action taken.
14. Recommendations for future improvement/ repeat incident
15. Name of Organization.

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Annexure - E

ORIGINAL

(Safety) Form

PERMIT TO WORK ON ELECTRICAL EQUIPMENT OR LINE (Clause 10.2.1)

Issued to

I hereby declare that following electrical equipment / line is dead and isolated from all line conductors:-

Caution notices have been affixed to all the controlling switches,

Here state exactly the electrical equipment / line, on which it is safe to work.

Here state exactly the points the electrical equipment / line is connected to earth.

All Other Equipment / Line are Live

Here state any specific limits or instructions which issuer may like

to add :- (.....

Signature with date, time and

designation (when (

Permit is by phone.

The name of the

Authorized person at

opposite end must be

noted.)

(..... issuer

(Sending end.)

Serial number of permit

(when permit is

by phone)

(.....

(Receiving end.)

Note : 1) This card after being signed by a competent person for the work to proceed, is to be handed to the authorized person in charge of the work and retained by that person until the work is completed or stopped by the authorized person.

2) The electrical equipment mentioned hereon must not be again made alive until this card has been signed and returned by the person in charge of the work to the issuer of permit.

I hereby declare that all man, earthing and materials under my charge have cleared the site equipment / line and men have been warned that it is no longer safe to work on the electrical equipment specified on the card.

Signature

Designation

Date :

Time :

I hereby declare this card canceled.

Signature

Designation

Date :

Time :

DATE

(Safety) Form

PERMIT TO WORK ON ELECTRICAL EQUIPMENT OR LINE (Clause 10.2.1)

I hereby declare that following electrical equipment / line is dead and isolated from all line conductors:-

Caution notices have been affixed to all the controlling switches,

I hereby state exactly the electrical equipment / line, on which it is safe to work.

I hereby state exactly the points the electrical equipment / line is connected to earth.

All Other Equipment / Line are Live

I hereby state any specific limits or instructions which issuer may like

(.....
with date, time and

on (when (

by phone.

of the

and person at

and must be

(..... issuer

(Sending end.)

Number of permit

number is

(.....)

(Receiving end.)

(to be used when permit is applied over telephone)

APPLICATION

To

At

I hereby permit to work on

Signature