

**GOVT.OF INDIA
MINISTRY OF LABOUR & EMPLOYMENT
DIRECTORAATE-GENERAL OF MINES SAFETY**

**APPLICATION FOR COMMENCEMENT OF SUPPLY TO THE INSTALLATIONS/
APPARATUS OF VOLTAGE EXCEEDING 650V UNDER CENTRAL ELECTRICITY
AUTHORITY (MEASURES RELATING TO SAFETY AND ELECTRIC SUPPLY),
REGULATIONS, 2010.**

(Before filling up the application form the applicants are requested to read the instruction for filling up application form as given in Annexure-A)

1.0 THE MINE

- (a) Name & Postal address of the mine with pin code
- (b) The name of the Owner
- (c) The name of the Agent
- (d) The name of the Manager
- (e) The name of the Engineer
- (f) Mine opening notice (copy to be enclosed)
- (g) Appointment of Mine Manager (copy to be enclosed)

2.0 THE PROPOSED INSTALLATION

- (i) Details of proposed apparatus in format given in Annexure-B (to be enclosed)

3.0 Location of proposed Electrical Installations/apparatus:

- (a) Surface:
- (b) Quarry with seam:
- (c) Belowground:
 - (i) Seam:
 - (ii) Degree of gassiness:
 - (iii) Quality of air location wise:
 - (a) Velocity in m/min
 - (b) Ambient temp.
 - (c) Wet/dry bulb temp.
 - (d) Humidity

4.0 State whether adequate lighting and adequate electrical fire fighting apparatus have been provided.

5.0 Earthing System:

- (a) Construction details of earth pits with resistance value
- (b) Layout plan of earth pits connections

6.0 Compliance with CEA (measures relating to safety and Electric Supply),Regulation 2010 as may be relevant for the type of installations.

- (i) Regulation 44(2)(iii)
- (ii) Regulation 44(2)(vii)(a)
- (iii) Regulation 44(2)(vii) (b) – (a) oil soak pit
 -(b) drain pit
- (iv) Regulation 45(1)(i),(ii),(iii),(iv),(v) & (vi)
- (vi) Regulation 45(2)(iii) & (iv)
- (vii) Regulation 52(xi) & (xii)
- (viii) Regulation 64(1),(2),(3),(4),(5) & (6)
- (ix) Regulation 71(1)(i),(ii) & (iii)
- (x) Regulation 72(1),(2) & (3)
- (xi) Regulation 74(1) & (2)

Remark - Put X mark if not applicable

7.0 Other information and relevant particulars:

- (a) Provisions of anti pumping relay / devices in case of motorized spring charging in switch gears.
- (b) Provision of battery bank (in case of major substations).
- (c) Provision of DC fail/ Low voltage alarm in sub-station / switch board panel
- (d) Layout plan of equipments in substation and switch room
- (e) Factory test report for new equipments, cables and insulating oil
- (f) Attested copy of concerned electrical supervisor's certificate of competency (department or contractor supervisor)

8.0 ELECTRICAL SINGLE LINE DIAGRAM & PLANS

- (i) Electrical Single line diagram bearing drawing No.& date duly signed by Electrical Supervisor, Colliery Engineer & Manager showing :
 - (a) Installation above 650V right from the point of commencement of supply
 - (b) Approved existing apparatus in BLUE colour
 - (c) Proposed apparatus in RED colour
 - (d) In case of cable size, rating and length is to be mentioned.
 - (e) In case of HEMM apparatus; schematic line diagram of associated apparatus

- (ii) Part mine plan showing belowground equipments with locations:

9.0. DECLARATIONS TOWARDS COMPLETION OF WORK

(i) In case the job is carried out departmentally:

A declaration stating that proposed installation work had been carried out under direct supervision of a competent and duly authorized electrical supervisor.

(ii) In case the job is carried out by an electrical contractor:-

(a) A declaration stating that proposed installation work had been carried out by a competent licentiate electrical contractor engaging competent and duly authorized electrical supervisor.

(b) A declaration stating that all the HT equipment inclusive of supply lines are placed in position, duly completed, examined and complied with the relevant regulations.

Note – In the case of departmental work, the declaration shall be signed by the manager, engineer and electrical supervisor and in the case of contractual work the declaration shall be signed by electrical contractor and electrical supervisor appointed by him and the declaration shall be countersigned by Manager and Engineer of the mine.

The duly filled in checklist along with the applicable supporting documents are to be submitted with the application.

Certified that the information given in this format and enclosed annexure-B and other enclosure with this application are correct and up to date to the best of my knowledge and belief.

(Name and signature of the Owner/Agent/Manager)

**CHECK LIST FOR SUBMISSION OF APPLICATION
(To be duly filled in and submitted by the applicant)**

Sl No	Details of submission	Applicable / Not applicable	Submitted (Yes/No)
1	Duly filled in application with signature of the Owner / Agent / Manager of the mine		
2	Details of the equipment for approval		
3	Copy of Mine opening notice		
4	appointment of Mine Manager		
5	Details of the apparatus as per Annexure-B		
6	Surface Mine Plan showing the location of the proposed substation		
7	Part underground mine plan showing the location of proposed installations and ventilation circuit		
8	The details of the earthing network or lay out		
9	single line electrical circuit diagram / drawings showing the existing & proposed installations		
10	schematic diagrams of switchgear / apparatus /HEMM		
11	Physical layout plan of the proposed installations		
12	Copies of Manufacturers' test certificates, / HV test certificates		
13	site test reports		
14	The details of the overhead lines		
15	Details of protective devices in the switchgears/ transformers		
16	Provision of battery bank		
17	Cable laying sketches		
18	NOC from the concerned Authorities for cable laying		
19	Work completion certificate		
20	Copy of the Supervisory Certificate of Competency		

Annexure-A

INSTRUCTION FOR FILLING UP THE APPLICATION FORM

1. Application seeking approval, the Owner / Agent / Manager of the mine or the declared Owner / Agent / Manager in case of Area S/S, Main S/S catering supply to a group of mines, shall submit application addressing to the concerned DMS (Electrical) of the Zone.
2. In case of newly opened small mines, copy of Mine opening notice as submitted to the Regional Inspector and concurrence of appointment of Mine Manager and /or relevant details to understand the existence of mines under Mines Act, 1952.
3. Overall single line electrical circuit diagram / drawings showing the existing installations in blue color and the proposed installations in red color right from the Point of commencement of supply, duly signed by the statutory officials including Mine Manager, Colliery Engineer and Electrical supervisor. (The single line diagram shall be indicative of cables, OH lines, different apparatus including switchgears etc., giving sizes / ratings relevant for assessment of load bearing on the part of supply and distribution system under normal and fault conditions)
4. The associated schematic diagrams of switchgear / apparatus /HEMM to understand technicalities therein on account of safety features.
5. Duly certified, Not to scale Physical layout plan of the proposed installations (indoor / outdoor) showing the horizontal / vertical clearances for assessment of placement of apparatus and safe working clearances.
6. Surface Mine Plan showing the location of the proposed substation / installations, duly under the signatures of Mine Manager, Colliery Engineer/ Installation manager and Electrical Supervisor.
7. Part underground mine plan (below ground mines, coal and Non coal) showing the location of proposed substation / installations and ventilation circuit therein (intake and return), duly certified by the competent persons to assess the right locations from quality of ventilation, access etc.
8. Copies of Manufacturers' test certificates, / HV test certificates as per standard recommendations from any other registered test facilities in house or external houses, duly counter signed by the authorized and competent technical officials of the applicant. Where for those installations / apparatus, approvals have been obtained previously from this Directorate; such details could become relevant information in guiding the health of those proposed apparatus and to act up on as replacement of manufacturer's test certificates / HV test certificates. In case of approval for older installations of sub stations,

the test reports using primary injection test kits for those CTs and relays may be submitted.

9. Duly certified, currently conducted site test reports for IR values of the proposed apparatus including cables, OH lines etc., and relevant test reports of relays /protective devices. The details of such testing apparatus - insulation tester / relay testing devices will be part of such reports. Where such site tests have been done through an outside agency, the certificates shall be further certified by the mine competent officials.
10. The details of the earthing network or lay out, earth resistance values of the earthing electrodes forming the network, as may be required along with the earth resistance tester details. In case of new substations or addition of installations at the substations, earth sizing calculations shall be submitted wherever necessary to provide effective earthing for fault protection and to contain touch and step potential hazards.
11. In case of overhead lines, the details shall include size and type of conductor, number of spans, spacing, height / ground clearances, earthing of poles / continuous earth conductor, cut points, number of poles, details of guarding, provision of lightning arresters etc., The sketches of those posts and lines shall be submitted to understand the arrangement.
12. Details of different protective devices in the switchgears, transformers, their settings, transformer oil test reports (in case of transformer) etc. shall be submitted to understand the effective working under fault conditions. Provision of DC fail alarm in the substation having DC power bank.
13. Cable laying sketches, mentioning the details of joints if any, duly certified by the concerned officials where it is relevant to understand the safe laying of cables as per practices.

While applying for laying of main supply cables en-route hazardous area locations of oil mines (production plants of oil mines), care shall be taken to see that no joints are allowed in hazardous area locations (as per zone classifications) on first priority. Where it is inevitable and joints cannot be excluded, such joints shall be fully encapsulated conforming to the recommended practices, executed by trained and permitted cable jointing personnel. Such precautions are pertinent to avoid any chances of open sparking. A Declaration in this regard by the applicant shall also be submitted.

14. In case of cables or overhead lines laid across railways / National highways or at any public places, Clearance /NOC from the concerned Authorities is relevant and the applicant shall submit the same as a part of documents, seeking approval.

15. Work completion certificate to the effect that the work has been done under the direct supervision of a person holding a certificate of competency and by a person holding a permit issued or recognized by the State Government and duly authorized by the Management.
16. In case where such works have been done by contractor Agencies, work completion certificate giving details of work executed, IR values, ER values etc., as may be applicable, stating that proposed installation work has been carried out under direct supervision of a competent and duly authorized electrical supervisor. (certified photocopies of credentials including contractor's competency certificate and supervisor's permit etc.), complying with the relevant provisions of CEAR, 2010. The same shall be duly countersigned by the authorized and competent officials.

ANNEXURE-B

Sl. No	Single Line Electrical Drawing No.	Name plate details/ Specification with make and Sl.No.	Location. In case of below-ground mention distance from face/goaf and intake/ return airway**	Megger SI. No. IR Value Ph-Ph / Ph.E	Insulating oil of the transformer/ OCB				High Voltage test in case of new equipments	Over current relay details CTR and relay setting	Earth leakage/ earth fault relay details, CTR and relay setting	Other protective relays details	Reference of previous approval no. in case of shifting	DGMS approval No. for FLP and intrinsically safe apparatus
					Di-electric strength	Acidity Test	Flash point	DGA (where applicable)						
1	2	3	4	5	6				7	8	9	10	11	12

Electrical Supervisor

Engineer

Manager

N.B.

DETAILS OF BE SUBMITTED IN THE SPECIFICATION COLUMN OF THE ANNEXURE – B

(i) FOR MOTORS:

- (a) Maker's name, (b) Serial No. (c) Type of Motor (d) HP/KV (e) Voltage
 (f) Class of insulation (g) Type of enclosure (h) Full load current (i) Other if any

(ii) FOR TRANSFORMER

- (a) Maker's Name (b) Serial No. (c) Capacity (d) Voltage Ratio (e) Current Ratio
(f) Vector Group (g) Type of cooling (h) Class of insulation (i) Protections (j) % Impedance
(k) Provision of Buchholtz Relay, oil and winding temperature indicators (l) DGA of Oil

(iii) FOR TRANSWITCH UNIT

- (a) Maker's Name (b) Serial No. (c) Capacity (d) Voltage Ratio (e) Current Ratio
(f) Vector Group (g) Type of cooling (h) Class of insulation (i) Protections (j) % Impedance

(iv) FOR SWITCHGEAR

- (a) Maker's name (b) Serial No. (c) Type (d) Rated voltage (e) Rupturing capacity
(f) making capacity (g) Current transformer ratio (h) Potential transformer ratio
(i) Details of protective relays (j) Details of tripping devices with range and time

(k) Details of differential relay, if provided

(V) FOR CABLES

- (a) Maker's name (b) Size (c) Voltage grade (d) Length (e) Details of straight through joints if any

(VI) FOR OVERHEAD LINE

- (a) Transmission/Utilisation Voltage (b) Length of overhead line (c) type of pole (d) No. of spans
(e) Average length of span (f) Type of insulators & conductors with size
(g) Clearance in between the ground and lowest conductor (h) Disposition of the conductors

- (i) Details of lightning arrestors [(a) Location ,(b) Details of its Earth Pit] (j) Location of cradle guard and earthing
- (k) Details of pole earthing/continuity of earth conductor
- (l) Details of protective devices (m) Clearance from surface features (Buildings etc.) (Vertical & lateral)