

# ELECTRICAL AUDIT / INSPECTION FORM FOR BRANCHES (INCLUDING ONSITE ATM), OFF SITE ATM & ADMINISTRATIVE OFFICES

NAME OF BRANCH / OFFICE:

DATE OF VISIT:

**Total Branch Load:**

**KW Per Phase Load:**

Phase I (KW)	Phase II (KW)	Phase III (KW)

Whether Load is balance or unbalanced : YES/NO

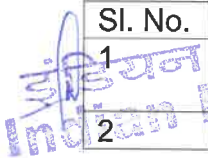
If Load is unbalanced Rectification to be done : \_\_\_\_\_

**Total Load of the Branch**

Rooms	Tube Light	Fan	Cooler	Water Cooler	PC	Printer	Cash Counting Machine	AC	UPS
Banking Hall									
Customer's Hall									
Strong Room									
Manager's Cabin									
Server Room									
Staff Room									
Canteen									
Stationery Room									
Toilets									
Any Other Room 1									
Any Other Room 1									
Any Other Room 2									
<b>Total Load</b>									

**Audit /Inspection Observations**

Sl. No.	Description	Observation
1	Condition of Main Distribution Board / Sub Distribution Board.	
2	Cables & wires used in the	



	<p>installation to be checked for required insulation and current carrying capacity. Condition of wiring with specific remark</p> <p><b>Note:</b> Bunching of wires to be avoided &amp; Proper clamping of conduits with wires to be done in the wall..</p>	
3	Loose connection & hanging wires.	
4	Heavy Duty contact points to be checked for the firm connection to avoid overheating and minimize power loss.	
5	<p>Condition of the fuses / main switches.</p> <p><b>Note:</b> If Branches are provided with old switches and boards it can be replaced with MCB's and Distribution Boards of suitable capacity.</p>	
6	<p>Whether any single plug point used for various power applications by means of any extension board.</p> <p><b>Note:</b> For avoiding overloading of Circuits.</p>	
7	<p>Non provision of MCB / Circuit Breakers of adequate capacity.</p> <p><b>Note :</b> Incoming and individual outgoing MCB's / switches to be rated with proper capacity</p>	
8.	<p>Condition of neutral wire / earthing</p> <p><b>Note:</b> Check for any loose connection</p>	
9	Details of Connected Load	
10	Sanctioned Load (By State Electricity Board) (in KW) Present Load (in KW) If the available Load is more than the sanctioned load then the additional equipments which are connected are to be ensured that the wiring / switches / MCBs provided is capable of withstanding additional load. This is the root cause of fire accidents.	
11	Power Consumption in excess of the sanctioned load.	

12	<p>Check for availability of measuring instruments in the Control Panel viz. Voltmeter, Ammeter, Frequency Meter, Power Factor Meter, Energy Meter for its calibration to measure electricity.</p>	
13	<p>Earthing:</p> <p>(a) UPS Earthing- Value in ohms.</p> <p>(b) Raw power Earthing- Value in ohms.</p> <p>(c) No: of earth pits</p> <p><b>Note:</b>UPS and Raw Power should have separate Earthing.</p>	
14	<p>Total UPS Load:-</p> <p>(a) Total no of UPS with capacity</p> <p>(b) UPS panel wiring</p> <p>(c) Whether alternate Nodes are connected to one UPS.</p> <p>(d) Is UPS under AMC with OEM or not?</p> <p>(e) Is whether UPS load balanced? Mention Current in all the three phases.</p> <p><b>Note:</b> If UPS load is imbalanced, the loads to be balanced in all the three phases.</p>	
15	<p>UPS Batteries:-</p> <p>(a) No of Batteries</p> <p>(b) Periodicity of servicing</p> <p>(c) Proper ventilation / Exhaust fan provided</p>	
16	<p>Air-conditioner:-</p> <p>(a) No of Airconditioners working round the clock with Tonnage.</p> <p>(b) Whether separate stabilizer provided for each AC unit</p> <p>(c) Any timer fixed to the AC units</p>	

	<p>for alternate functioning.</p> <p>(d) Check whether supply for ACs is drawn through power points.</p> <p>(e) Date of last servicing carried out.</p> <p>(f) Eligible life span of ACs.</p> <p>(g) Whether Outdoor units are earthed?</p> <p>(h) Whether Ac's are covered in AMCs? If Yes, what is the frequency of Preventive Maintenance in a year?</p> <p><b>Note</b> : Periodic cleaning of AC filters is mandatory.</p>	
17	<p>Any Generator provided</p> <p>(a) Location</p> <p>(b) Capacity (in KVA)</p> <p>(c) Periodical maintenance (Whether AMC with OEM or not?)</p> <p>(d) Change over switch manual or automatic.</p>	

### **SAFETY QUESTIONER**

S.NO.	DESCRIPTION	DETAILS	REMARKS
1	WHETHER TPN ISOLATORS / MCCBs / ELCBs / ARE PROVIDED TO CATER THE LOAD	YES / NO	
2	WHETHER LIGHTS AND EMERGENCY LIGHTS ARE PROVIDED IN ELECTRICAL ROOM / OPERATING AREAS FOR EASY OPERATION & MAINTENANCE WORKS	YES / NO	
3	WHETHER PUMP ROOM, DG SET ROOM, UPS ROOM, AC PLANT ROOM, ELECTRICAL PANEL ROOM ARE MAINTAINED IN DRY AND IN GOOD CONDITION AND OBSOLETE / HAZARDOUS / OLD ITEMS ARE NOT DUMPED THERE.	YES / NO	
4	WHETHER WATER SEEPAGE IS OBSERVED NEAR ANY OF THE ELECTRICAL PANEL, DISTRIBUTION BOARD, ELECTRICAL EQUIPMENT, ETC	YES / NO	
5	WHETHER EARTHING PITS ARE PROVIDED AND CONNECTED TO EQUIPMENT AND THE BODY OF EQUIPMENT	YES / NO	
6	WHETHER EARTHING PITS ARE MAINTAINED PROPERLY	YES / NO	

7	WHETHER EXHAUST FANS FOR VENTILATION OF PANEL ROOM / ELECTRICAL ROOM / UPS ROOM / DG SET ROOM IS PROVIDED AND NO PAPER, OLD MATERIAL OR ANY OTHER SCRAP IS KEPT NEAR DB / PANELS / UPS / BATTERIES ETC.	YES / NO	
8	WHETHER PENALTY IS BEING IMPOSED IN ELECTRICITY BILL ON ACCOUNT OF HIGHER LOAD / POOR POWER FACTOR / POOR LOAD FACTOR ETC (ACERTAINED FROM THE ELECRCITY BILLS OF APRIL/MAY/JUNE/JULY) ADDITIONAL ELECTRICAL LOAD REQUIRED (IF ANY)	YES / NO	
9	WHETHER LOAD IS DISTRIBUTED IN ALL THREE PHASES TO AVOID ANY UNBALANCING OF PHASE LOAD AND NO LOOSE ELECTRICAL CONNECTIONS / HAPHAZRAD WIRINGS OBSERVED IN THE BUILDING / OFFICE PREMISES.	YES / NO	
10	WHETHER ISOLATING SWITCHES ARE PROVIDED FOR SWITCHING OFF OF THE NON ESSENTIAL LOADS IN PREMISES DURING NIGHT AND MAIN SWITCH TO SWITCH OFF THE POWER SUPPLY TO THE BUILDING / FLOOR IN CASE OF FIRE / EMERGENCY.	YES / NO	
11	WHETHER PROPER PREVENTIVE MAINTENANCE AFTER OPENING OF THE ELECTRIACL BOARDS AND DISTRIBUTION BOARDS ARE CARRIED OUT BY THE LICENSE HOLDER ELECTRICIAN OR SKILLED TECHNICIANS OF EQUIPMENT MANUFACTURER / SERVICE PROVIDERS.	YES / NO	
12	WHETHER APPROPRIATE TIMERS USED IN THE CHANGEOVER OF AIR CONDITIONERS FOR SERVER ROOM ACs AND FOR SIGNAGE BOARDS TO MAKE AUTO ON / OFF (FOR SCHEDULE TIMINGS). THE THERMOSTAT OF THE ACs AT SERVER ROOM SHOULD BE SET TO SAY 26 C, SO THAT IT WILL RUN ONLY WHEN THE TEMPRATURE IS TOO HIGH (TO MINIMIZE CHANCES OF FIRE DUE TO IDLE RUNNING OF THE ACs DURING NIGHT)	YES / NO	
13	WHETHER PREVENTIVE MAINTENANCE OF THE ELECTRIC INSTALLTION AND EQUIPMENT IS CARRIED OUT BY SKILLED LICENSE HOLDER ELECTRICIANS / SKILLED TECHNICIANS	YES / NO	
14	GENERAL CONDITION OF ELECTRICAL CONTROL PANELS, MAIN SWITCH, ELECTRIC METER BOARD, CHANGE OVER SWITCH, AC, WATER COOLERS, WATER FILTERS, WIRING CABLES ETC ARE IN GOOD CONDITIONS AND DBs, PANELS, SWITCH BOARDS ARE PROPERLY COVERED	YES / NO	
15	WHETHER ELECTRICASAFETY L EQUIPMENTS OF PANTRY ETC ARE PROPERLY CONNECTED TO INDUSTRIAL SOCKET BOX WITH MCBs. MCBs OR LATEST TYPE SWITCHES ARE PROVIDED TO SWITCH ON / OFF THE ACs TO PROTECT THEM FROM OVERLOAD.	YES / NO	

16	WHETHER THE CONTACT NUMBER OF PERSONS, ELETRICIANS, POWER DISTRIBUTION COMPANY, GENERTOR SERVICE PROVIDER, UPS VENDORS, ACs ETC ARE AVAILABLE WITH SECURITY GAURDS AND OTHER STAFF ARE DISPLAYED IN ELCTRIC / UPS/ SERVER ROOM.	YES / NO	
17	WHETHER POWER FACTOR CORRECTION PANEL OF APPROPRIATE RATING IS INSTALLED.	YES / NO	
18	WHETHER ALL THE CONNECTING POINT AT VARIOUS DBs AND PANELS ARE PROPERLY INSULATED AND PROPER INDICATIVE MARKING ARE DONE ARE THE RESPECTIVE PANEL /DB	YES / NO	
19.	WHETHER THE INTERNAL INSULATION OF THE WIRE HAVE BEEN ACCOUNTED FOR CHECKING THE DURABILITY OF ELECTRICAL CONNECTION	YES / NO	
20	ALL OLD DISPOSABLE RECORDS, BROKEN FURNITURE ETC ACCUMULATED IN THE PREMISES HAVE BEEN CLEARED.	YES / NO	
21	COMBUSTIBLE LEAF LITTER / WASTE PAPERS ETC IN AND AROUND THE BRANCH ARE REMOVED / CLEANED PERIODICALLY	YES / NO	
22	NO STATIONARY / RECORDS / OLD OBSOLETE ITEMS ARE STORED / KEPT IN THE SERVER / UPS / ELECTRIC ROOM	YES / NO	
23	STORAGE RACKS IN STATIONARY / RECORD ROOM KEPT AT A SAFE DISTANCE OF AT LEAST 2M FROM ELECTRICAL POINTS / SWITCH / JUNCTION BOXES	YES / NO	
24	WHETHER IN THE PANTRY / CANTEEN, LPG IS USED	YES / NO	
25	ARE THE FIRE EXTINGUISHERS AVAILABLE IN THE FOLLOWING WORK AREA AND CLEARLY MARKED AND ACCESSIBLE: 1. SERVER / UPS ROOM: CO2 TYPE X 2 2. INDIVIDUAL DEPARTMENT OF THE PREMISES: CO2 TYPE X 1 3. STATIONARY ROOM: CO2 TYPE X 1 4. ELECTRIC ROOM / AC PLANT ROOM: CO2 TYPE X 2 5. DG SET/GENERATOR : 6KG ABC CAPACITY X 2	YES / NO	
26	WHETHER SERVER ROOM HAVE DUAL AC UNITS WITH TIMER CIRCUIT DEVICE ON INDEPENDENT	YES / NO	
27	WHETHER EXHAUST FANS ARE INSTALLED IN UPS ROOM	YES / NO	
28	WHETHER PROPER INSULATION AT THE BATTERIES HAVE BEEN PROVIDED	YES / NO	







**FORMAT FOR ELECTRICAL SAFETY AUDIT  
FOR PREMISES HAVING MULTIPLE FLOORS / OFFICES**

1. Assessment of luminaries / light fittings

Type of luminaries / light fittings	No of luminaries / light fittings	Lux level of luminaries / light fittings	Total electrical load consumption		Remarks (Condition of light fixtures acceptable or Not)	Suggestions for improvement, if any
			Watt	Amp		

2. Floor wise assessment of Air conditioning system

Type of Air Conditioning units	No of Air conditioners	Capacity of Air Conditioner (TR)	Total electrical load consumption	Condition of air conditioning system	Remarks (Condition of machine acceptable or Not)	Suggestions on improvement, if any

3. Floor wise assessment of UPS

No. of UPS	Capacity (KVA)	P-P Voltage of each UPS			P-N Voltage each UPS			Phase Currents			Total electrical load consumption KW    A	Neutral Earthing & its adequacy	Protective earthing & its adequacy	Remarks (Condition of machine acceptable)	Suggestions on improvement, if any
		R	Y	B	R	Y	B	R	Y	B					

4. Floor wise assessment of electric circuit

Sl.No	Heads	Result	Remarks (acceptable or Not)	Suggestions on improvement, if any
1	Presence of Main switch interlocking if two different supplies are coming to Distribution panel			
2	Availability of correct identification of circuit details and protective devices			
3	Presence of nonstandard (mixed) cable color warning notice at or near consumer unit / Distribution board			
4	Cables correctly supported throughout their run or not			
5	Condition of insulation of live parts			
6	Adequacy of wiring for current carrying capacity with regard to the type and nature of the installation			
7	Adequacy of protective devices, type and rated current for fault protection			
8	Presence and adequacy of circuit protective conductors			
9	Whether Low voltage cables segregated from Medium voltage cables			
10	Whether Cables separated / segregated from non-electrical services			

11	Whether proper termination of cables at enclosures				
12	Connections soundly made and under no undue strain	Insulation of conductor visible outside enclosure			
		Connections of live conductors adequately enclosed			
		Adequately connected at point of entry to enclosure (glands, bushes etc.,)			
		Condition of accessories including socket outlets, switches & joint boxes			
13	Other special observations, if any record the results of particular inspections applied Separately				

#### 5. Floor wise assessment of electrical Panel room

Sl.No	Heads	Result	Remarks acceptable or Not)	Suggestions on improvement, if any
1	Presence of Main switch interlocking if two different supplies are coming to Distribution			
2	Availability of correct identification of circuit details and protective devices			
3	Presence of nonstandard (mixed) cable colour warning notice at or near consumer unit / Distribution board			
4	Cables correctly supported throughout their run or not			
5	Condition of insulation of live parts			
6	Adequacy of wiring for current carrying capacity with regard to the type and nature of the installation			
7	Adequacy of protective devices, type and rated current for fault protection			
8	Presence and adequacy of circuit protective conductors			
9	Whether Low voltage cables segregated from Medium voltage cables			
10	Whether Cables separated / segregated from non electrical services			
11	Adequacy of protective earthing conductor			
12	Adequacy of Neutral earthing conductor			
13	Whether proper termination of cables at enclosures			
14	Connections soundly made and under no undue strain	insulation of conductor visible outside enclosure		
		Connections of live conductors adequately enclosed		
		Adequately connected at point of entry to enclosure (glands, bushes etc.,)		
		Condition of accessories including socket outlets,		

15	Details switch gear panels	No of Panels			
		Rating of panels			
		Measurement of P-P & P-N voltage of Panels			
		Measurement of P-P & P-N current of Panels			
		Condition of Panels Any other observations			
16	Whether method of Cables laid inside the Electrical room is acceptable				
17	Total Electrical Load of the Floor	Air conditioning load			
		Light & power load			
18	Whether electrical load balancing is acceptable				
19	Other special observations, if any record the results of particular inspections applied separately				

### 6. Assessment of Transformer

No. of Transformers	Capacity of each Transformer 1. Rating 2. make 3. type	P-P Voltage of each Transformers			P-N Voltage each Transformers			Phase Currents			Total electrical load consumption KW    A	Neutral Earthing & its adequacy	Protective earthing & its adequacy	Condition of insulation	Whether transformers loaded/under loaded and extant thereof in %	Remarks (Condition of machine acceptable or Not)	Suggestions on improvement, if any
		R	Y	B	R	Y	B	R	Y	B							

### 7. Assessment of Elevator

No	Capacity of each elevator s 1. Rating 2. make 3. type	P-P Voltage			P-N Voltage			Phase Currents			Total electrical load consumption KW    A	Parameters of the motors				Neutral Earthing & its adequacy	Protective earthing & its adequacy	Condition of insulation	Remarks (Condition of machine acceptable or Not)	Suggestions on improvement, if any
		R	Y	B	R	Y	B	R	Y	B		No	Capacity (KW)	Voltage	Current					

### 8. Assessment of Pump

No of Pump	Capacity of each pump 1. Rating 2. make 3. type	P-P Voltage		P-N Voltage		Phase Currents			Total electrical load consumption		Parameters of the pump motors				Neutral Earthing & its adequacy	Protective earthing & its adequacy	Condition of insulations	Remarks (Condition of machine acceptable or Not)	Suggestions on improvement, if any			
		R	Y	B	R	Y	B	R	Y	B	KW	A	No	Capacity (KW)						Voltage	Current	Condition of motors

### 9. Assessment of earthing system

**Earthing Continuity Testing:** This Test is conducted to find out any equipment that has not been earthed properly and in compliance with Indian Electricity Act 1956, IS-1200 part I and as per IS-3043 of 1966. It is to be checked with the help of Continuity Testing Meter and Earth Resistance Meter

Sl. No	Heads	Result	Remarks (acceptable or Not)	Suggestions with new technologically energy efficient, environment friendly, cost benefited air conditioning system
1	No of earth pit			
2	Type			
3	Earthing test report			
4	Continuity test report			
5	Condition of total earthing system for the building. (Give detail report)			
6	Neutral Earthing & its adequacy			
7	Protective Earthing & its adequacy			
8	Other special observations, if any record the results of particular inspections applied separately			

### 10. Assessment of lighting protection system

Sl. No	Heads	Result	Remarks (acceptable or Not)	Suggestions with new technologically energy efficient, environment friendly, cost benefited air conditioning system
1	Number of terminals			
2	Number of down conductors			
3	Continuity of conductor			
4	Condition of the lightning conductor			
5	Joints condition			
6	Testing point on down conductor			
7	Earth conductor condition			
8	Earth resistance			
9	Other special observations, if any record the results of particular inspections applied separately			

11. Assessment of Diesel Generating Set:

No of Diesel Generator Set	Capacity of each Diesel Generator Set 1. Rating 2. make 3. type	P-P Voltage of each Diesel Generator Set			P-N Voltage of each Diesel Generator Set			Phase Currents			Total electrical load consumption		Neutral Earthing & its adequacy	Protective earthing & its adequacy	Condition of insulation	Whether Diesel Generator Set over loaded/un loaded	Remarks (Condition of machine)	Suggestions on improvement, if any
		R	Y	B	R	Y	B	R	Y	B	KW	A						

SIGNATURE WITH SEAL

(CONSULTANT / CONTRACTOR)

(OFFICER OF BRANCH / OFFICE)

NAME OF THE ELECTRICAL ENGINEER / CONSULTANT / CONTRACTOR:

SUPERVISOR'S VALID LICENSE NO:

DATE:  
PLACE:

The particulars furnished in the application are true to the best of my/our knowledge & belief. I/we understand that if any of the particulars is found incorrect, even at a later stage, my/our contract will be cancelled.

SIGNATURE WITH SEAL

(CONSULTANT/CONTRACTOR)

DATE:  
PLACE:



**FORMAT FOR ELECTRICAL ENERGY AUDIT FOR BRANCHES**

BRANCH CODE & NAME	
ADDRESS	
SANCTIONED LOAD	
CONNECTED LOAD	
MONTHLY ELECTRICITY BILL (APPX)	
TOTAL TONNAGE OF AIR CONDITIONER LOAD	
AREA OF THE BRANCH	

**ELECTRICAL ENERGY AUDIT:**

S.No.	DESCRIPTI	Wattage	Recommendatio
1.	Type of Electrical Fittings installed and its		
2.	No of Ceiling Fan installed and its power consumption.		
3.	No. of Wall Fan installed and its power consumption		
4.	No of Air-conditioners and its capacity and power consumption of each		
5.	No of computer installed and its power consumption.		
6.	UPS installed and its capacity		
7.	Any other gadgets installed and its power consumption.		
8.	Verification of electricity Bill for last 12 months and observation if any		
9	Leakage if any in the wiring system		

The particulars furnished in the application are true to the best of my/our knowledge & belief. I O/we understand that if any of the particulars is found incorrect, even at a later stage, my/our contract will be cancelled.

SIGNATURE & SEAL OF AUDITOR

DATE:

PLACE: