



**APPOINTMENT OF AGENCY (SBI EMPANELLED) FOR ELECTRICAL AND FIRE SAFETY AUDIT,**

The SBI Life Insurance Co Ltd intends to engage the services of a Professional Agency (SBI Empanelled) for Electrical and Fire Safety Audit, having registered office in Mumbai/Thane/Navi Mumbai for Carrying at Electrical Audit of SBI Life Corporate office (Natraj) CPC-Seawoods, Belapur & Mumbai RO-Jogeshwari. The interested applicant should submit the offer for providing the aforesaid services (i.e Technical & Commercial bid) as per the enclosed format (Annexure-I & II).

Interested participant should submit the documents latest by 03.00 PM on 8<sup>th</sup> April, 2017. In a sealed cover proposal for "APPOINTMENT OF ELECTRICAL AUDIT AGENCY FOR CARRYING OUT ELECTRICAL AND FIRE SAFETY AUDIT. "addressed to The Assistant Vice-President (NSSO), Corporate Office, SBI Life Insurance Co Ltd, "NATRAJ" Ground Floor ,M V Road & Western Express Highway Junction ,Andheri (E) Mumbai -400069.

SBI Life reserves the right to reject any/all proposals without assigning any reason whatsoever

Vice President-Management Services

Dear Sir,

SBI Life Insurance Company Limited is a joint venture between the State Bank of India and BNP Paribas Assurance. It started its operations in 2001, and has a network of 14 regional offices and 800 branches and a work force of over 8500 employees located across the country. SBI Life's corporate office is at Mumbai.

You are advised to go through the tender document carefully and understand various provisions contained therein along with their implications.

Procedure: - Based on the details of the services, the agency will have to quote Professional fee per office plus applicable service tax for the subject assignment. The professional fees shall be quoted as per Annexure-II. The SBI Life will not reimburse any amount towards traveling expenses for visit of the offices, lodging / boarding, manpower employed or for Tiffin

The offer should be submitted in two bid system i.e Envelop-I superscribed as "Technical Bid for Carrying out Electrical and Fire Safety Audit" and Envelop –II " Commercial Bid for Carrying out Electrical and Fire Safety Audit" Both the envelopes duly sealed to be put into the third envelop sealed properly and superscribed as "Appointment of Electrical and Fire Safety Audit Agency for Carrying Extensive Electrical and Fire Safety Audit" and dropped in the tender box on Gr Floor , Natraj Building M.V Road, Andheri Kurla Road, Andheri ( East) Mumbai-400069 on or before 8<sup>th</sup> April,2017 till 15.00 hrs.

A pre-bid meeting will be held on 3<sup>rd</sup> April,2017 when queries of the bidders if any will be dealt with.

The sealed Envelope-I & ii i.e Technical & Commercial Bid will be opened on later date with due information of date & time of opening.

## **Key objectives of the Electrical and Fire Safety Audit: -**

### **Electrical Safety:-**

- Assessment of the complete electrical distribution system.
- Assessment of connected load vis-à-vis sanctioned load / contract demand.
- Assessment of electricity bills for the penalties imposed by the power supply agency for exceeding contract demand, delayed payment charges and non-maintenance of power factor.
- Assessment of status of electrical safety and protective systems like H.T & L>T switchgears, D.G set , MCCBs, MCBs, ELCBs/RCBs, Isolators etc.
- Assessment of insulation resistance of cables, wires etc.
- Assessment of earthing system.
- Assessment of quality of electrical wiring practices, switchgears used.
- Assessment of UPS/Battery, hub/servers for safety and proper location.
- Assessment of energy consumption vis-à-vis connected load.
- Assessment of lighting arrangement/ Lighting arrester arrangement.

### **Fire Safety:-**

- Checks of adequate functional fire safety equipment extinguishers are installed in the premises and fire safety procedure in place.

### **Scope of Work: -**

**Electrical Safety:-** Scope of work includes Electrical & Fire safety audit on the following measures:

- a. Visiting each & every office and verifying the installation by competent Electrical engineer (as detailed in the formats enclosed).
- b. Installation Audit
- c. Suggestion on Corrective measures necessary towards electrical fire & safety measures, Upgradation in the electrical system, electrical load, connected load vis-à-vis sanctioned load, enhancement of contract demand, billing penalties etc.
- d. Submission of Report as per Annexure –I enclosed .

### **Fire safety:-**

- Check fire extinguisher are refilled before expiry.
- Check emergency evacuation procedure documents available.
- Check emergency Nos list put on board.
- Check emergency evacuation training and evacuation carried out twice in a year by the branch/office authority.
- Check safety essential equipment like sprinklers, smoke/fire detectors are installed.

The study should also comprise of suggesting measure for efficient energy conservation and exploring intensive routes for utilization of lower energy by;

- Optimal utilization of the various facilities for savings in energy
- Extension of the life of Electrical assets by giving thrust to predictive maintenance techniques and averting probable breakdowns.
- System & Human Safety
- Capacity Utilization
- Interchangeability, expandability & scope for retrofits and improvement modifications.
- Maintenance Practices for equipment/system & records.

- Check if refuge/ safe area and assembly are available for the premises.
- Check the procedures in place for Emergency Evacuation. As part of procedure, the display of emergency Nos., layout and escape route marked as a chart displayed as high visibility area.

#### **Power Quality Analysis**

- Power quality measurement (Thermographic Analysis of all DB's /Breaker etc)
- Identify and differentiate internal problems from those due to power quality.
- Suggest corrective measures.
- Check for loose connection.
- Check for wiring under the false ceiling.

#### **Corrective measures**

- To suggest improvement measures on the existing electrical system.

#### **(Services and Facilities Provided by the Client)**

- Information and data required for the purpose of undertaking the assignment would be provided as per availability to the agency.

Note: All other facilities like office space, telephone, mobile, conveyance, Computer, Printer, Photo Copier, FAX Machine, Lap Top Computers, Internet / e-mail Connection, modem etc., will not be provided and will have to be arranged by the Consultants.

#### **Terms & Conditions of Payment:-**

1. After submission of complete electrical & fire safety audit report, payment will be made within 15 working days.
2. After receiving the work order from respective offices the work has to be started within 7 days and it should be completed within 30 days along with electrical and fire safety audit report.
3. If the work is not started/executed and completed within the above mentioned timeline a penalty of 0.5% per week per office will be deducted from payment.

#### **Qualification of Person Conducting Audit:-**

1. BE/ BTech electrical with minimum 7 year experience or Diploma holder in electrical with 10 year experience.

### BIO – DATA OF ELECTRICAL AND FIRE SAFETY AUDIT AGENCY

Sr	Particulars	Details
1.	a) Name of the Agency:- Whether proprietary / partnership / Pvt. Ltd. / Public Ltd., (Furnish certificate of registration/ partnership deed to be enclosed as Annexure-I) b) Name of the Proprietor, : Partners, Directors c) Year of establishment : 3. Registration with Registrar: of Companies (No. & Date) (For Corporation only) 4. Registration with Tax Authorities: i) PAN/CIN/TIN	
2	Give details if at present involved in : Litigation in similar type of contracts 1. Name of Project 2. Nature of work. 3. Value Rs.	
3	Details of work executed regarding Electrical & Fire Safety Audit of Banks and PSU during the last 3 years (Please mention the qualifying works)	
4	Furnish copies of audited balance sheet and Profit & Loss A/C. for the last 3 years.	
5	Should have adequate in-house manpower of Electrical Engineers with support staff (pl provide details)	
6	Electrical Measuring Equipment available with the agency & their details	

## **DECLARATION**

1. I / We have read the instructions appended to the Proforma and I / We understand that if any false information is detected at a later date, any future contract made between ourselves and SBI Life Insurance Co Ltd, on the basis of the information given by me / us can be treated as invalid by the SBI Life and I / We will be solely responsible for the consequences.

2. I / We agree that the decision of SBI Life in selection of agencies will be final and binding to me / us.

3. All the information furnished by me hereunder is correct to the best of my knowledge and belief.

4. I / We agree that I / we have no objection if enquiries are made about the work listed by me / us in the sheets.

5. I / We agree that I / We have not applied in the name of sister concern for the subject empanelment process.

SIGNATURE

NAME & DESIGNATION SEAL OF ORGANISATION

Place:-

Date:-

## **Commercial BID**

Sr	Description	Amount (Rs)
	Charges for Conducting Electrical & Fire Safety Audit and Submission of detailed report as per the format given.  Corporate Office:- Natraj  CPC- Seawoods.  Belapur Office:-  Mumbai RO- Jogeshwari  ( PI quote separately)	

Amount in words (Rs).....

Applicable taxes will be paid extra.

Stamp & Sign of tenderer

## Electrical and Fire Safety Audit

**Corporate Office :-** SBI Life Insurance Co Ltd, Natraj Bldg, M V Road, Andheri Kurla Road, Andheri (East) Mumbai-400069.

**CPC:** - Sbi Life Insurance Co Ltd, D Wing, 7th Level, Tower 2, Seawoods Grand Central, Plot No. R - 1, Sector 40, Seawoods, Navi Mumbai 400 706.

**Belapur Office:** - , 1st Floor, KAPAS Bhavan, Plot No. 3A, Sector 10, CBD Belapur, Navi Mumbai - 400 614

**Mumbai RO:-** SBI Life Insurance Co. Ltd, Flexcel Park, B Wing 1st floor, Next to 24 carat Multiplex, Jogeshwari West, Mumbai - 400 102

1	Address of branch/office	
2	Name of Engineer	
3	Educational Qualification of Engineer	
4	Measuring Instrument (Make and Model)	(a)
		(b)
		(c)
		(d)
5	Is there any power breakdown that occurs frequently in the branch- If so - is it regular / irregular?	
6	Opinion of the Admin In- charge regarding frequent power breakdown /shut down	
7	Is there any irregular tripping that exists in the office? - If so - is the tripping - frequent / occasional / very rare?	Frequent / Occasional / Very Rare
8	Building/Premises establishment year.	
9	Whether same wiring/cabbling used while occupying the space of new cabling done?	

### A. Meter Details

	Description	Observation
1	Name of State Electricity Board	
2	Type of metering(LT/HT)	
3	Incoming Supply (Single OR Three Phase )	
4	Sanction load (kW)	
5	Connected load (kW)	
6	Latest Energy Consumption of Branch/Office In KWH and Bill amount in Rs.....	
7	Actual used load of the branch. ( With All A.C.'s ON)	
8	Energy Consumption of Branch/Office For last 6 months Month- KWH & Amounts (Total)	
9	Average power factor during last quarter. Whether any P.F. penalty is levied in the past 6 months.)	
10	Size Of Incoming S.E. Board Cable/Wires	
11	Condition Of Incoming Cable /Wires Joints/Burnt Insulation if any.	
12	Whether Temperature Of Incoming cable Hot/Normal	
13	Whether Cable /Wire are loose? /condition of connector fixing under false ceiling.	



14	Whether Utility Supply meter 1Ph/3Ph. and its Volt, Amp Capacity.	
15	Output wire Size from Utility Meter to Fuse/MCB/MCCB/SFU switch etc.	
16	Output of Meter wires are terminated in Fuse OR MCB OR MCCB OR SFU units with Amp. Capacity of Switchgear & no of poles. Whether Copper/Aluminium lugs used?	
17	No Of Earth wires with Incoming Utility Supply cable/Wires and their Size.in Sq.mm/SWG	
18	Size of Cable/Wires in Sq.mm from FUSE/MCB/MCCB/SFU at output of meter to Main Switch/MCB/MCCB in Branch/Office ( Separate switch is provided. OR the wires are terminated directly in Main D.B. Incomer. Pl. indicate). Whether Cable/wires are terminated with proper LUGS.	
19	No of Earth wires connected to main D.B. Is it a Utility Earth Or Separate Building Earth wire/s.	
20	Voltage at incoming panel (V)	R-N:                      Y-N:                      B-N:                      N-E:
21	Current at incoming panel (A) in all 3 phases.	Ir:                              ly:                              lb:                              In:
22	Total Measured load (kW/kVA)	

#### **B. DG Set**

1	Whether D.G. set back –up is provided? If YES Whether by Landlord OR SBI Life? Any AMC?	
2	Capacity Of D.G. set in KVA & Whether single/3 phase?	
3	Whether AMF panel is provided at the D.G. set OR Manual Changeover switch is provided? Its capacity & no of poles.	
4	Whether separate earthing provided to Neutral & body of D.G. set and brought with D.G. cable/wires up to Change-over Switch.	
5	D.G. set Output Voltages	R-N                      Y-N:                      B-N:                      N-E
6	Whether full OR part load put on DG set? Total load on DG	
7	Whether D.G. is operated by the operator appointed by Landlord OR S.B.I. Life?	
8	Whether D.G. set operator is well conversant with operation & electrical safety aspects?	
9	Resistance of earth pit/ earth wire as measured in Ohms. Whether Earth Pits are approachable?. Whether proper chamber/Water Fennel is provided for adding water?	

#### **C. UPS & Inverter**

1	Total no Of U.P.S. in the branch. Whether 3 Ph. Input& Single Ph. O/P/. OR 1Ph/1Ph. UPS.	
2	KVA Capacity & Make of UPS	
3	Voltage, AH capacity & make of batteries & their Quantities. (Whether SMF/Tubular)	

4	Whether batteries installed in UPS cabinet OR Separate battery rack is provided?	
5	Are battery rack provided with earthing?	
6	UPS & batteries are kept in a separate room Or in Hall? Whether UPS is under AMC? Whether AMC vendor is doing regular Maintenance & submitting the report.	
7	In case a separate room is provided whether A.C.OR Exhaust fan is provided for ventilation? In case of hall whether proper Exhaust fan provided near UPS batteries?	
8	Whether battery room is clean? & No waste papers/files OR other material stored/put over them? Room is clean?	
9	Condition Of Batteries & Total battery voltage as per quantity & rating.	
10	UPS Output Voltages (V)	L-N:                      L-E :                      N-E:
11	Load on the UPS output (A)	
12	Whether UPS Input/ Output wires are laid through conduit pipe OR Armored cable used?	
13	Whether separate Inverter is provided for Lighting of branch?. If provided whether it has an AMC? Whether regular checking is being done by AMC vender?	
14	Inverter Rating & battery details.	

#### **D. Server Rack/Switch Room**

1	Whether Server switch/switches etc kept in locked server rack Or in open?	
2	Whether Server rack is earthed?	
3	Separate Server Room OR in secured place in hall?	
4	Is Fire extinguisher located close/reasonable distance from Server/UPS & Type of Extinguisher?	
5	Are CAT5/6 cables to switch properly dressed? OR hanging?	

#### **E. Air- Conditioners**

1	Type & Tonnage capacity + Quantity of each type in Br/Off. (Window/Split/Cassette/Packaged}	
2	Whether timer is provided? For UPS/Server room AC?	
3	AC Units provided by Landlord OR SBI LIFE & whether under AMC?	
4	Whether Metallic S/S is provided OR normal Switch/Sockets?	
5	Whether Voltage stabilizers provided? /Needed if wide voltage fluctuation exists in area?	

#### **F. General Parameters**

1	Whether illumination of Branch is Normal/Dull/Very bright?	
2	What is condition Of lighting fixtures?	

3	Whether load distribution from M.C.B. to individual circuit is indicated by chart pasted in D.B.?	
4	Is any AS BUILT Drawing available in Branch /office?	
5	Is Electrical Danger mark sticker pasted on D.B. Cover? Or on wooden door if D.B. is enclosed in a wooden cupboard?	
6	If D.B. /Main Switchgear is enclosed in wooden cupboard any ventilation louvers provided? Are any materials dumped in the cabinet?	
7	What is a frequency of power failures in Branch/Office as reported by Branch/Office Admin In-charge? Whether Incoming Voltages Normal/LOW/High?	
8	Whether the wiring of Branch/Office Needed checking of Insulation with MEGGAR Instrument by taking total shutdown (based on condition of wiring & it's life period condition 8 years). For main panel, UPS DB, Raw Power DB and Lighting DB.	
9	How many D.B.'s are provided in Branch /office? Power/Light /UPS separate D..B.'s or Common?	
10	Give Details Of Incomer /Outgoing Switch/ELCB/MCB/MCCB in each D.B. ( For more nos attach separate sheet)	
11	If E.L.C.B. is provided in main/Sub. D.B. their mA & Amp ratings.	Main D.B. L.D.B. Raw Power D.B. U.P.S. D.B.
12	Incoming & Output Switchgear ratings for U.P.S. & whether proper no & size of earth wires are connected to D.B.'s	
13	Whether Separate Building Earth Pit is Available?	
14	Resistance of earth pit/ earth wire as measured in Ohms. Whether above Resistance is checked at earth pit or at D.B. earth wires with Earth Clamp/Tong tester?	
15	Whether double earthing is provided for 3 phase D.B?	

**G. Connected Load Calculation**

Equipments	Watts	Quantity	Total Watts
ACs			
Tube Lights			
CFL/LED			
Water Cooler			
UPS 1			
UPS 2			
Printer			
Computer/Laptop			
Xerox Machine			
Pantry Equipment			
<b>Total Connected Load:</b>			

**H. Safety Suggestions/ Recommendations Based On Risk Observed**

Sr	Risk Factors Observed in Last Audit Report Dated _____	Suggestion/Recommendations Given.	Present Status Complied /Still pending.
1			
2			
3			
4			
Sr	Fresh Observations Needing Suitable Corrective Action. Specify risk if not attended?	Suggestion/Recommendation For rectification.	Whether essential/ desirable based on Risk factor?
1			
2			
3			
4			

**I. Energy and Cost Saving as a Result of the Audit/ Inspection**

1	Estimated energy to be saved after rectification of risk factors (if any-in watt/kW)	
2	Estimated cost reduction/cost saving as a result of the audit/inspection (if any)	

**J. OVERALL Risk Rating Of Branch /Office: ( Please Write High/Medium/Low Risk)**

Give Criteria /Specific Reason for considering the Branch/office as **High/Medium/Low Risk. (Mandatory)**

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.....  
.....  
.....  
.....  
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**K. Fire Training/ Inspection Form for Branches/ Offices**

Essentials Information		
1	Total No of Staff including Branch manager.	
2	Dates of last two emergency evacuation drill last held and persons present	Date .....Persons present..... Date .....Persons present.....
3	Are danger boards available at electrical & UPS room?	
4	Are fire exits signs installed at floors?	
5	Are emergency contact Nos. displayed in English, Hindi & Local language?	
6	Are emergency exit maps displayed at floors?	
7	Is First Aid Box available along with appropriate fillings?	
8	How many nos of Each category of Fire Extinguishers are available in branch/office with their capacities:	A Type:                      BC Type:                      ABC Type: CO2 Type:                      DCP Type:
9	Are all the Fire Extinguishers ISI marked?	
10	Are all the Fire Extinguishers installed at visible and accessible places?	
11	Are fire extinguishers servicing & refilling done as per required periodicity?	
12	Do the staff members know to operate the fire extinguishers	
13	Is any Fire Extinguisher Type & Operating chart available near Extinguisher/s?	
14	The essential integration of fire alarm, Public announcement and safety equipment with the building systems done?	

