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October 2019

From the Secretary's Desk



#### Hello Friends,

EEAM

During September, Maharashtra – especially Pune (Where I live) experienced "High Voltage shock" from receding rains. The meteorology was also wondering whether it was "Return Monsoon" or "Return of Monsoon". Some of our esteemed members also suffered in Pune. Such incidences give us proof of eternal fact that Human does not have control on Nature. We all in Maharashtra will go through state assembly elections this month – let us hope for betterment. (Politics - One more area where nothing much is in our (Buddhi – jivi's) hands!). Any way - still the life goes on and we can not just keep looking at whatever is happening around.

**E-NEWS** 

So, .... let us go Back to business.

The much-awaited Chartered Electrical Safety Engineer (CESE) GR is released by Government of Maharashtra in September. You can find a rational assessment of this GR and effects on electrical safety scene due to this (Off course from the point of view of author)

CEEAMA AGM happened as scheduled on 20th Sept. About 50 members were present despite of heavy downpour in Mumbai. All necessary resolutions were passed by the meeting. Many thanks to the members. GC launched CEEAMAT-ECH 2020 - at AGM - one day conference on Industry 4.0 now scheduled on 8th Feb 2020 at Hotel Sahara Mumbai. You can find e copy of a detail event brochure along with this E News. GC requests support of all the members for this event. For any of queries related to this event you can contact me (9822529734) or Mr. Vinayak Vaidya (9822064556) any time. Let us all work towards grand success of this event as usual. There were some other good suggestions about CEEAMA interaction with academics during AGM – GC will discuss this further in forthcoming meeting to take this ahead.

The second-round table meeting on "Importance of codes and standards in Electrical designs", happened in Pune on 27th Sept as scheduled. About 35 invitees attended the same. The proceedings

Were quite interesting and we are in the process of preparing MOM. The reports will be shared in next issue of ENEWS as the Mumbai meeting on same subject is scheduled on 11th Oct. CEEAMA governing council wishes "Happy Diwali" to all the members - in advance – as our next interaction will be after Diwali.

Let me end with standard usual appeal --- Please come forward for CEEAMA activities. We need participation – we also need Directors.

Goodbye till next issue. Narendra Duvedi Hon Secretary.



Whats New: ABB Ability™ Electrical Distribution Control System a Cloud -based energy management

Article: Comments and Understanding of Government Resolution No. Misc 2019/ C.R. 96/ Energy-5 regarding Chartered Electrical Safety Engineer (CESE).



## Whats New

#### ABB Ability™ Electrical Distribution Control System a Cloud -based energy management

ABB AbilityTM Electrical Distribution Control System, a breakthrough innovation for cloud-based energy management, remote supervision and diagnostics has been introduced in the US market by the innovative technology leader ABB. The system connects a facility's electrical equipment with the Internet of Things and leverages ABB circuit breaker's built-in sensing and connectivity to provide the information and control functions to reduce total operating costs by up to 30 percent.

ABB AbilityTM Electrical Distribution Control System has a cloud-based platform that processes data from the site's electrical equipment to deliver analysis and make recommendations to optimize the performance of the electrical system. It enables the remote monitoring of plants, their energy consumption and costs at a glance to make it easier and faster to implement energy management strategies.

ABB AbilityTM Electrical Distribution control system provides direct supervision of electrical assets and reporting functions. With alerts, immediate access to documentation and the remote diagnosis of devices, maintenance becomes simpler. When necessary, facility managers can take corrective action in a matter of minutes.

They have launched circuit breaker with intelligent energy management, the ABB Emax 2, four years ago and continue to innovate to ensure their customers benefit from cutting edge technology. This will benefit from gaining intelligence about their electrical system so that they can maximize energy savings, productivity and safety.

Source:http://www.abb.com/cawp/seitp202/790E94168A0618A6C12580E3003ADCA5.aspx

**Contributed By Mangesh Shirgaonkar** 



Comments and Understanding of Government Resolution No. Misc 2019/ C.R. 96/ Energy-5 regarding Chartered Electrical Safety Engineer (CESE).



The total number of accidental deaths by electrocution in India was 9606 during 2014. The top 10 states/UTs in terms of accidental deaths by electrocution in India during 2014 were: Madhya Pradesh, Maharashtra, Rajasthan, Uttar Pradesh, Gujarat, Chhattisgarh, Andhra Pradesh, Telangana, Tamil Nadu and Karnataka.

The total number of accidental deaths by electrocution in Madhya Pradesh was 1664 during 2014, which was 17.32% of the total number of accidental deaths by electrocution in India during the year. The total number of accidental deaths by electrocution in Madhya 2014, which was 14.29% of the total number of accidental deaths by electrocution in India during the year. The total number of accidental deaths by electrocution in India during the year. The total number of accidental deaths by electrocution in India during the year. The total number of accidental deaths by electrocution in India during the year. The total number of accidental deaths by electrocution in Rajasthan was 995 during 2014, which was 10.36% of the total number of accidental deaths by electrocution in India during the year.

Source: https://community.data.gov.in/accidental-deaths-by-electrocution-during-2014/

I have included some official data regarding "Deaths due to electrocution" from government records for the year 2014 – just to highlight depth of the issue related to electrical safety, which we all know. Number of reported deaths was 1373 during 2014. This takes it to around 4 human beings per day. The figures showing permanent / reversible disabilities due to electric shock are not readily available. These are figures obtained from reported accidents, there may be many more unreported accidents.

#### MANY OF THESE CAN BE AVOIDED IF ELECTRICAL INSTALLTIONS FOLLOW SAFE ELECTRICAL PRACTICES.

Maharashtra alone has over 3 crore metered electrical installations. It is humanly impossible to have employed government manpower to approve and physically inspect these installations for electrical safety. It was suggested to have an inspection infrastructure somewhat parallel to Chartered accounts – who officially help clients to follow income tax rules and regulations.

After a very long wait Government of Maharashtra has come out with GR dated 20th Sept 2019 regarding Chartered Electrical Safety Engineer (CESE) as per CEA guidelines. Here is an attempt to evaluate the said GR and it's expected impact on electrical safety.

#### Salient features of the GR of Government Resolution No. Misc. 2019/ C.R. 96/ Energy-5 dated 20th Sept 2019.

- Applicable only up to notified voltage I.e. 11kv.
- Establishments covered under sec 54 of electricity act I.e. Generation transmission distribution infra and establishments covered under factory act and public establishments where 100 or more persons can gather are not covered.
- Degree holders with 5 years and diploma holders with 10 years of relevant experience are allowed to appear for the qualifying examination.
- CESEs will help consumers to self certify electrical distribution at those locations which receive incoming voltage less than or equal to 11kv and which are not covered in sec 54 as mentioned above.
- CESEs will have to report noncompliance to EI.
- Fees fixed are Rs 5000 for initial work and Rs.3000 for subsequent inspections irrespective of size of establishment.
- Dates and frequency of qualifying examination not mentioned in GR.
- Waiver of Examination is at sole discretion of EI
- Retired persons from Department of EI are automatically qualified.



#### **Observations and comments:**

- GR says these CESEs will assist consumers if they need this assistance for Self-declaration; which means inspections are not compulsory.
- Almost all public places owned and operated by municipalities, municipal corporations, Railway stations etc will not be covered. Even medium size commercial establishments with 11KV input having offices accommodating more than 100 people will not be covered.
- The GR does not say that CESEs will be involved in approval of drawings for new connections up to 11kv notified voltage. Now a days El offices say that they are not responsible for testing up to 11kv notified voltage. If this is true, contractors / electricians can design erect commission and make consumer self-declare safety, required compliance and commission the installation. This will mean no third-party control over safety and quality.
- The GR does not specify any mandatory periodicity of inspection by CESEs for the installations up to or bellow notified voltage so it is not clear as to how this GR will contribute in making and maintaining these installations electrically safe. (CEA regulation says that consumer has to declare self-certification once a year)
- Urban and Rural Roadside utility distribution will not be covered.
- Maharashtra has so many commercial and Industrial establishments which are potentially unsafe and operate at 22, 33 KV and above. These installations have very large fault levels, and during electrical safety audits, we come across lot of non-compliances. El offices do not get enough time to undertake detail inspection of these establishments there will not be any value difference in these after CESEs start working.
- These CESEs will not have powers to check the installations on their own at any periodicity.
- List of Instruments specified are not sufficient to check thermal status of various equipment, they will not be sufficient to check quality of current and related heating, capacity validation etc.
- Detail check list is not provided which is expected to be followed during such inspections. (CEA forms do not cover all the details).

These observations indicate that the said GR will hardly contribute in improving electrical safety in various electrical installations. The declared charges for involvement of CESEs may not be acceptable to experienced auditors. In fact, I personally feel that it was not necessary to decide these charges in the GR as the exact scope of work is not clearly defined. While "assisting" client may require more services. It is not possible to cover multiple visits in these charges.

#### Summary:

The basic aim of improving electrical safety and compliance over all sectors of electrical consumers will have very little impact from this GR.

By

Narendra Duvedi.

**Electrical safety auditor** 

**Hon Secretary CEEAMA** 



Guidelines for Authorising Chartered Electrical Safety Engineers (CESE)

# Government of Maharashtra INDUSTRIES, ENERGY AND LABOUR DEPARTMENT Government Resolution No. Misc 2019/ C.R. 96/ Energy-5 Mantralaya, Madam Cama Marg, Hutatma Rajguru Chowk, Mumbai 400 032 Dated the 20<sup>th</sup> September, 2019

**Ref**: Letter of Central Electricity Authority No. CEI/1/2/2018 dated 21<sup>st</sup> June 2018

## Preamble -

In accordance with the Regulation 5A of Central Electricity Authority (Measures relating to Safety and Electric Supply) Amendment Regulations, 2018, the Central Government has introduced Self Certification of the electrical installation by the owner or Chartered Electrical Safety Engineer (CESE) upto the notified voltage.

In pursuance of the guidelines issued for authorizing the Chartered Electrical Safety Engineer by Central Electricity Authority (CEA), it was under consideration of the Government of Maharashtra for adopting guidelines for the state of Maharashtra, for authorizing the Chartered Electrical Safety Engineer upto the Notified Voltage declared by Government of Maharashtra from time to time. After consideration the State Government has decided to issue following Government Resolution :

## **Government Resolution –**

In pursuance of the guidelines issued for authorizing the Chartered Electrical Safety Engineer by Central Electricity Authority (CEA), the Government of Maharashtra hereby adopt and issue the following guidelines for the state of Maharashtra, for authorizing the Chartered Electrical Safety Engineer upto the Notified Voltage declared by Government of Maharashtra vide notification issued in this regard from time to time.

## 1. Short title and commencement :-

- (1) These guidelines may be called the "Guidelines for authorizing the Chartered Electrical Safety Engineers (CESE)" under regulation 5A of Central Electricity Authority (Measures relating to Safety and Electric Supply) Amendment Regulations, 2018.
- (2) They shall come into force with immediate effect.



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Definitions :- In these guidelines, unless the context otherwise requires,
 (a) "Board " means the Licensing Board established vide rule (2) of the Maharashtra Electrical Licensing Board Rule 2017.

(b)"Chartered Electrical Safety Engineer or CESE " means a person authorized by the Government as referred to in CEA safety Regulation 5A.

(c) "Government" means Government of Maharashtra.

(d) "Notified Voltage" means a voltage notified by the State Government for the purpose of spacifying the voltage level upto which self-cetification is to be carried out under . Regulation 30 and regulation 43 of the Central Electricity Authority (Measure relting to Safety and Electrical Supply) Regulations 2010.
(e) Words and expressions used and not defined in these guidelines but defined in the Electricity Act, 2003 and CEA (Measures relating to Safety and Electric Supply) Regulations, 2010 (as amended) shall have the meanings respectively assigned to them in the Electricity Act, 2003 and CEA (Measures relating to Safety and Electric Safety and Electricity Act, 2003 and CEA (Measures relating to Safety and Electric) Safety and Electric Supply) Regulations, 2010 (as amended) shall have the meanings respectively assigned to them in the Electricity Act, 2003 and CEA (Measures relating to Safety and Electric Supply) Regulations, 2010 (as amended).

## 3. Qualifications and mode of selection of Chartered Electrical Safety Engineer:-

(a) The Chartered Electrical Safety Engineer shall be :

(i) an Electrical Engineering degree holder or equivalent degree with at least five years experience in operation and maintenance of electrical installations and also shall have the knowledge of the works related to observance of electrical safety regulations, or

(ii) an Electrical Engineering Diploma holder with at least 10 years of experience in operation and maintenance of electrical installations and also should have the knowledge of the works related to observance of electrical safety regulations.

- (b) He/She shall qualify the on-line written examination conducted by Board. The procedure for conducting on-line written examination for the Chartered Electrical Safety Engineer is as follows :
  - i. Eligible Engineer, who is domiciled in the state of Maharashtra appearing for CESE on-line written examination shall make an on-line application as given in Advertisement, after paying the application fees as decided by the Board from time to time through the mode as inidcated in the advertisement.
  - ii. Engineer, who is domiciled in the state of Maharashtra, is eligible for exemption from CESE on-line written examination shall make on-line application as given in Advertisement after paying the application fees



as decided by the Board from time to time through the mode as inidcated in the advertisement.

- iii. Syllabus for examination is given in the guidelines as decided by the Central Electricity Authority from time to time. Indicative syallabus has been indicated at Annexure I.
- iv. Examination will be of Multiple Choice Questions (MCQ) Type or any other mode as decided by the Board and would be indicated in the advertisement.
- v. The Board will issue authorization certificate to those who have qualified in examination in **ANNEXURE-II** and those who are exempted from on-line written examination in **ANNEXURE-III**.

(c) He/She shall have the knowledge of Electricity Act, 2003 and Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010 (as amended) and other relevant Acts and Regulations related to electricity supply.

(d) Retired Chief Electrical Inspector/Superintending Engineer/Electrical Inspector of Electrical Inspectorate wing of Energy Department of the Government of Maharashtra having requisite qualifications as indicated para 3(a) above, are eligible for CESE and they will be exempted from examination.

(e) CESE shall not hold any post in Government/ Semi Government /Public Sector Undertakings/ Companies or associated with any organization which directly or indirectly influence the working of CESE.

(f) He/She shall for all the time in his possession have the basic testing equipments (indicative list of basic equipments is given in **ANNEXURE-IV**) as may be prescribed by the Board for testing of the electrical installations.

## 4. Scope of work -

The CESE shall assist the owner or supplier or consumer of electrical installations for the purpose of self-certification upto the level of notified voltage provided those installations which are not covered under Section 54 of Electricity Act, 2003.

## 5. Duties and Responsibilities of Chartered Electrical Safety Engineer -

(a) He / She shall carry out recommended tests as per the relevant Regulations and Standards.



(b) He / She shall test electrical installations and keep a record thereof in Form-I/Form-II/ Form-III of Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010 (as ammended), as the case may be, and submit the same along with photographs/video of the apparatus tested to the supplier or owner or consumer by whom he/she is hired and to the respective office of the Electrical Inspector (EI) within seven working days from the date of testing and will produce the same at the time of renewal. The Electrical Inspector may, on receipt of Self-certification report referred above, accept the report submitted by the supplier or owner or consumer in format given in **Annexure-V** or record variations as the circumstances of each case may require or recommend that the defects may be rectified as recommended in format given in **Annexure-VI**.

(c) The owner shall carry out the recommendations given by the CESE in this report, within the time prescribed in the report. In case the owner fails to rectify the shortcomings as identified by the CESE even after the prescribed period, the CESE shall inform the same to the repective office of the Electrical Inspector within a period of 15 days from the expiry of the time prescribed in the report of rectification. Such records shall be made available to the office of the Electrical Inspector (EI) by the owner or CESE, as and when required.

d. If, on inspection of installation of the owner or supplier or consumer, as the case may be, the CESE is satisfied that the installation is likely to be dangerous for the use of electricity, he/she shall bring the same to the notice to the owner and to the respective office of Electrical Inspector (EI) within the period of 48 hours from the date of testing. The Electrical Inspector (EI) on receipt of such notice shall direct the supplier to take immediate action as per Regulation 31 and /or Regulation 30(6) of CEA (Measures relating to Safety and Electric Supply) Regulations, 2010.

### 6. Fees and leavy charges of CESE :-

(a) Fees for Testing of electrical installation in a single premise upto notified voltage under CEA Safety Regulation 43 shall be Rs. 5000 **per installation.** 

(b) Periodic Testing of electrical installation in a single premise upto notified voltage under CEA Safety Regulation 30 shall be Rs. 3000 **per installation.** Fees to be levied by the CESE to the owner or supplier or consumer shall be received in the modes other than cash.

## 7. Accessibility of CESE to the Consumers :-

The Board on behalf of the State Government shall upload the names of the authorized CESE, within 30 days, after issuing the Authorisation Certificate, on the their web portal dealing with matters of inspection of electrical installations for the information of the owner, supplier and consumer.

### 8. Others terms and conditions :-

(a) It shall be the responsibility of owner or supplier or consumer of the installation to maintain and operate the installation in a condition free from danger and as recommended by the manufacturer / Chief Electrical Inspector (CEI) / Superintending Engineer / Electrical Inspector (EI) / CESE as per the relevant codes of practice of the "Bureau of Indian Standards".

(b) The authorization of a Chartered Electrical Safety Engineer shall be liable to be suspended or cancelled by the Board, if he/she is found, to be indulging in willful negligence, mal-practices, misuse or any other activities affecting directly and indirectly the safety of electrical installations. However, no such authorization shall be suspended/cancelled unless an opportunity of being heard is given to the concerned CESE.

(c) The authorization of Chartered Electrical Safety Engineer will be issued to any person initially for the period of three years at the time of registration and will be renewed for further period of two years by the Board based on the performances of CESE on the fees decided by the Baord from time to time. However, the authorization will cease automatically on his/her attaining the age of 65 years. There shall be only one time fees of Rs. 10,000/- for the registration as CESE. The procedure for the renewal of authorisation shall be prescribed by the Board.

(d) In case of any dispute arising between CESE and owner or supplier or consumer on the inspection, the decision of the respective Electrical Inspector on the same, shall prevail. An appeal against the decision of the respective Electrical Inpector shall be heard by the respective Superintending Engineer.

(e) Any electrical installation which have been checked *I* tested by the CESE may be inspected/revisited by the Chief Electrical Inspector or Electrical Inspector in case he/she is not satisfied with the check/testing carried out by CESE.

(f) The testing equipment used by the CESE shall be calibrated at any NABL accredited laboratory at least once in every two years.

This G.R. is available on Government of Maharashtra web site – www.maharashtra.gov.in and its unique code is 201909191955444510. This G.R. is digitally signed.

By order and in the name of the Governor of Maharashtra,

## ( Prashant Badgeri ) Deputy Secretary to Government.

## Copy to:

1. Prinicipal Secretary to Hon'able Governor of Maharashtra.



- 2. Prinicipal Secretary to Hon'able Chief Minister of Maharashtra.
- 3. Private Secretary to Hon'able Minister (Energy).
- 4. Private Secretary to Hon'able Leader of Opposition, Legistative Secretariat / Council.
- 5. Private Secretary to Hon'able Minister of State (Energy).
- 6. All Departments of Mantralaya
- 7. Chairman & Managing Director, MSEDCL, Prakashgad, Bandra, Mumbai.
- 8. Chairman & Managing Director, MSPGCL, Prakashgad, Bandra, Mumbai.
- 9. Chairman & Managing Director, MSETCL, Prakashganga, Bandra, Mumbai.
- 10. Director General, MEDA, Pune.
- 11. Secretary, M.E.R.C. Mumbai.
- 12. General Manager, BEST, Mumbai.
- 13. Chief Executive Officer, Adani Eletricity Mumbai Ltd.
- 14. Managing Director, TATA Power Ltd., Mumbai.
- 15. Chief Electrical Inspector /S.E./E.I., IEL Deptt.
- 16. Deemed Distribution Licensee in the State of Maharashtra.
- 17. Select File (Energy-5).



## (Annexures appended to the Government Resolution No. Misc 2019/ C.R. 96/ Energy 5 dated 20<sup>th</sup> September 2019)

## ANNEXURE - I

## INDICATIVE SYLLABUS FOR CHARTERED ELECTRICAL SAFETY ENGINEER

- 1. Electrical elements and measurement : Basic knowledge of electrical circuit elements and parameters, measurement methods and measuring instruments used for electrical parameters i.e. current, voltage, power in DC networks; active power, reactive power, energy, frequency, power factor in single and three phase AC networks; power factor correction, Reactive power compensation.
- 2. **Transformer :** Basic Principle, types, construction, equivalent circuit, Voltage Regulation, Parallel operation, knowledge of erection and commissioning, precommissioning tests and test equipments used, transformer oil test and analysis, various transformer protections and relays used, knowledge of fire safety of transformer, preventive maintenance of transformer.
- **3. Electrical machines, cables and wiring** : Basic principle of DC motors, AC motors, starters and speed control of AC motors, Variable Frequency Drivers (VFDs) and its application, testing, protection and preventive maintenance of various motors.

Internal wiring – Domestic, industrial; Cables – types of cables, current and voltage ratings, selection, application, laying methods, cable protection and testing, causes of breakdown, preventive maintenance, methods and use of equipment for preventive measures like Partial discharge, thermo-vision etc.

 Power System : a) Generation – Basic knowledge of different types of power plants – Thermal, Hydro, Nuclear, Renewable energy sources, Nonconventional energy sources, DG sets, various generator tests, protections and relays used.

**b) Transmission system –** Basic knowledge of transmission line electrical parameters, type of conductors, types of towers, type of insulators, Reactive power compensation, various clearances from conductor of transmission line as per CEA Safety Regulation, transmission line protections and relays used, transmission line tests and routine maintenance.

c) Electrical Substation – Type of substation – AIS and GIS, layout and Bus bar scheme, earthing layout, type and basic principle of substation apparatus including circuit breaker, CT, CVT/PT, isolator, earth swich, wave trap, surge arrestor, LT switchgears, DC Batteries, Chargers, UPS, SCADA System, protection schemes and relays used for protection of various substation equipments, various operational interlocks, pre-commissioning tests of substation apparatus, procedure and test equipments used.



- 5. Distribution and LT Switchgears Type and selection of electrical elements used in distribution i.e. fuses, ACBs, MCBs, MCCBs, ELCB/RCCB, switchboards, bus duct, synchronizing panels, linked switch with fuse, RMU, HT and LT Panels, APFC Panels, PLC logic panels, testing method of these switchgears and test equipments.
- 6. Earthing Types of system earthing, fault level calculations, type of earthing rod/plate, earth conductor sizes, earth resistance measurement and test equipment used, earthing of substation apparatus, transmission and distribution lines/towers, earthing at consumer premises, earthing of industrial and domestic equipment.
- 7. Safety from electricity and fire Personal protective equipments (PPE's) used in connection with safe use of electricity like Hand Gloves, Rubber Shoes, Waist belt, earthing rod, Goggles etc., Safe working clearances for different voltage levels, fire extinguishers used for different applications, knowledge of Static electricity, Lightning protection, Electrical Safety Audit, Elementary knowledge of first aid.
- 8. Act, Safety Regulations and relevant Code and Standards Electricity Act, 2003, Factories Act, 1948, CEA(Measures relating to Safety and Electric Supply) Regulations 2010, CEA(Technical Standards for Construction of Electrical Plants and Lines) Regulations, 2010, CEA(Technical Standard for Connectivity to the Grid) Regulations, 2007, Relevant IS/NEC/IEC Standards mentioned in CEA Regulations or used in connection with generation, transmission, distribution of electricity, testing procedure, earthing of electrical apparatus and switchgears, fire safety, National Electrical Code, National Building Code, all amendments in the Acts, Regulations, Code and Standards as mentioned above.

\* \* \* \* \* \* \* \*

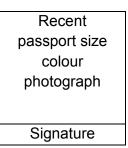


ANNEXURE - II

GOVERNMENT OF MAHARASHTRA

## REGISTRATION OF AUTHORISATION OF CHARTERED ELECTRICAL SAFETY ENGINEER

Registration No. CESE/



Shri/Kum/Smt	has passed
the qualifying examination of Chartered Electrical Safety Engineer held at	on
(Roll No ) is hereby, granted authorization as	CHARTERED
ELECTRICAL SAFETY ENGINEER under regulation 5A of Central Electr	icity Authority
(Measures relating to Safety and Electric Supply) Regulations, 2010.	

Date

Chairman of the Board

Seal

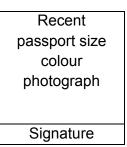


## ANNEXURE – III

### GOVERNMENT OF MAHARASHTRA

## REGISTRATION OF AUTHORISATION OF CHARTERED ELECTRICAL SAFETY ENGINEER

Registration No. CESE/



Shri/Kum/Smt,	having
satisfied that his/her qualification entitled him/her to exemption from taking the pres	scribed
examination of Chartered Electrical Safety Engineer is, hereby granted authorizat	tion as
CHARTERED ELECTRICAL SAFETY ENGINEER under regulation 5A of C	Central
Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2	010.

Date

Seal

Chairman of the Board



### **ANNEXURE-IV**

### Indicative list of Basic testing equipment

- **01.Voltmeter :** Use to measure potential difference occurs any equipment/ electrical apparatus.
- **02. Ammeter :** An instrument for measuring electric current in amperes.
- **03. Multimeter :** A multimeter can measure voltage, current and resistance.
- **04. Megger/Earth Insulation Tester :** An instrument for measuring the resistance of electrical insulation.
- 05. Line Tester.
- **06. Tong-tester :** An electrical meter with integral AC current clamp is known as a clamp meter, clamp-on ammeter or tong tester.
- 07.Safety Helmet : It should be available as per Indian Standard (IS:2925)
- **08.Safety Belt :** It should be available as per Indian Standard (IS:2521)
- **09.Safety Shoes :** It should be available as per Indian Standard.
- **10. Hands Gloves :** It should be available as per Indian Standard.
- 11. Others necessary testing kits : as suggested by the office of the CEI/SE/EI.



## **ANNEXURE - V**

### Acceptance of Self-Certification Report

To,

Name and Address of the Supplier/ Owner/ Consumer

- Sub:- Acceptance of Self-Certification Report submitted by <u>Name of the Supplier/</u> <u>Owner/ Consumer</u> for installations at <u>installation address of the Supplier/</u> <u>Owner/ Consumer.</u>
- Ref:- Self-Certification Report dated \_\_\_\_\_submitted by <u>Name of the Supplier/</u> <u>Owner/ Consumer</u>

(<u>Name of the Supplier/ Owner/ Consumer</u>) has submitted self-certification report under regulation 30/43 for <u>installation address of the Supplier/ Owner/ Consumer</u> and requested for acceptance of the same by this office. The list of equpiments are as given below:

Sr.	Name of the Equipment with Voltage, Capacity etc.	Quantity
No.		

It is hereby said that self-certification report submitted by <u>Name of the Supplier/</u> <u>Owner/ Consumer</u> for installations at <u>installation address of the Supplier/ Owner/</u> <u>Consumer</u> under regulation 30/43 is found to be generally in order. Hence selfcertification report submitted by <u>Name of the Supplier/ Owner/ Consumer</u> for installations at <u>installation address of the Supplier/ Owner/ Consumer</u> under regulation 30/43 is hereby accepted. The acceptance of self-certification report submitted by <u>Name of the Supplier/</u> <u>Owner/ Consumer</u> is subject to full compliance of the relevant provisions of CEA ( Measures relating to safety and Electric Supply ) Regulations 2010 (as amended to date) in every respect.

**Electrical Inspector** 



## ANNEXURE – VI

### Recomendations to rectify the defects in Self-Certification Report

Τo,

Name and Address of the Supplier/ Owner/ Consumer

- Sub:- Recomendations to rectify the defects in Self-Certification Report submitted by <u>Name of the Supplier/ Owner/ Consumer</u> for installations at <u>installation</u> <u>address of the</u> <u>Supplier / Owner / Consumer.</u>
- Ref:- Self-Certification Report dated \_\_\_\_\_submitted by <u>Name of the Supplier/</u> <u>Owner/ Consumer</u>

Vide letter under referance <u>Name of the Supplier/ Owner/ Consumer</u> has submitted self-certification report under regulation 30/43 for <u>installation address of the</u> <u>Supplier/ Owner/ Consumer</u> and requested for acceptance of the same by this office. While scrutinizing the defects found are given below:

Sr. No.	Regulation	Description of defects	Recommendation

Hence self-certification report submitted by <u>Name of the Supplier/ Owner/</u> <u>Consumer</u> for installations at <u>installation address of the Supplier/ Owner/ Consumer</u> under regulation 30/43 is hereby rejected for rectification of defects as recommended above. Point wise full compliance report with referance to the relevant provisions of CEA (Measures relating to safety and Electric Supply) Regulations 2010 (as amended to date) in every respect shall be submitted within 15 days from the recepit of this letter. If the owner/ supplier/ consumer fails to comply, necessary action will be initiated as per guideline no. 5 (d).

**Electrical Inspector** 



# 8th Annual General Meeting 20th September 2019, at Chembur Gymkhana, Mumbai









# **2nd Round Table Meeting on** Importance of codes and standards in Electrical Design on 27th September 2019, Pune







