

## the Electrical Contractors' Association (S.A)

### Representing your Trusted Electrician / Electrical Contractor

#### BOSVELD REGION

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## Towards improved OHSAct (Electrical Installation Regulation 2009) compliance and co-operation between Utilities and the contracting fraternity

### Author & Presenter:

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the Electrical Contractors' Association of SA  
Regional Director: BOSVELD Region, also  
Technical Advisor & Secretary to the ECA National Technical Committee

After matriculation, embarked on career as apprentice millwright with Yskor 1976.  
Passed Trade Test 1979  
Furthered education as learner technician  
Obtained NHDip & Registered with ECSA  
Experience:

- 5 Years Running mill maintenance and test floor work
- 10 Years Consulting Engineers: Building, Reticulation and Industrial Services at some leading firms
- 3 Years Facilities Management, Director of Engineering at Five Star Hotel
- 9 Years Self-employed as Electrical & Mechanical Contractor
- 16 Years Regional Director at ECA (BOSVELD Region)

### 1. Introduction

We will be highlighting:

Clarification of typical misunderstandings regarding the differences between jurisdiction of the Electrical Installation and Machinery Regulations (EIR/EMR),

Interaction between, split and responsibilities regarding EIR & EMR.

Typical instances where utilities (unwittingly?) transgress and how ECA can assist to aid compliance ranging from smallest maintenance, township reticulation to transmission lines, from conception through design, construction, commissioning and maintenance even operation.

Facilitation of contact with reliable & accountable registered contractors

### 2. Electrical Installation Regulations (& CoC's) applicable to Munics?

Electrical works operated or owned by utilities can loosely be grouped in two.

The one group would be the generation/transmission/reticulation/distribution functions, which resorts under the NERSA rules and the Electrical Machinery Regulations 2011.

The scope hereof is:

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**Services Include: Labour Relations - Training - Client Liaison - Contractual Advice Technical Advice  
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**Scope of application**

2. (1) *These Regulations shall apply to the designers, manufacturers, installers, sellers, users, employers and suppliers who design, manufacture, install, sell, generate or use electrical machinery.*

(2) *These Regulations shall apply to users who generate, transmit or distribute electricity whether overhead or underground to the point of supply.*

Thus, electrical machinery primarily from source to point of supply.

This would include generation, transformer, switching, transmission, distribution, metering and other control equipment. Generally the City/Town electrical engineer is in charge of, and responsible for this part of the system, up to and including the point of supply.

The other group, conversely is what could be loosely termed "domestic" wiring, like the installations of sockets and lights in offices, substations, power stations, workshops, warehouses, perimeter and security lighting, and also streetlight and traffic light installations. All these also applies to all of us (use, no person etc.) at home and elsewhere.

This grouping resorts under the Electrical **Installation** Regulations 2009.

Firstly some relevant definitions from the EIR 2009:

**"electrical installation"** means any machinery, in or on any premises, used for the transmission of electricity from a point of control to a point of consumption anywhere on the premises, including any article forming part of such an electrical installation irrespective of whether or not it is part of the electrical circuit, but excluding

(a) any machinery of the supplier related to the supply of electricity on the premises;

(b) any machinery which transmits electrical energy in communication, control circuits, television or radio circuits;

(e) an electrical installation on a vehicle, vessel, train or aircraft; and

(d) control circuits of 50 V or less between different parts of machinery or system components, forming a unit, that are separately installed and derived from an independent source or an isolating transformer;

**"installation work"** means

(a) the installation, extension, modification or repair of an electrical installation;

(b) the connection of machinery at the supply terminals of such machinery; or

(c) the inspection, testing and verification of electrical installations for the purpose of issuing a certificate of compliance;

Then we need to consider who is responsible for such installations:

**Responsibility for electrical installations**

2. (1) *Subject to subregulation (3), the user or lessor of an electrical installation, as the case may be, shall be responsible for the safety, safe use and maintenance of the electrical installation he or she uses or leases.*

The municipality can be the only user, with the responsible person being dependent upon the internal delegation.

It could be anyone of, or combination of the Mayor, Municipal Manager, City Electrical Engineer, appointed consultant / contractor or other delegated person, provided such delegation is done correctly and on record.

This responsibility dictates that:

1) The munic SHALL have a valid Certificate of Compliance (CoC) for every installation, and keep it current by obtaining a supplementary one for every change and/or alteration.

**Certificate of compliance**

7. (1) *Subject to the provisions of subregulation (3), every user or lessor of an electrical installation, as the case may be, shall have a valid certificate of compliance for that installation in the form of Annexure 1, which shall be accompanied by a test report in the format approved by the chief inspector, in respect of every such electrical installation.*

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*(4) Where any addition or alteration has been effected to an electrical installation for which a certificate of compliance was previously issued, the user or lessor of such electrical installation shall obtain a certificate of compliance for at least the addition or alteration.*

2) It shall also ensure that all installation work is done in accordance with the SANS 10142-1 (the incorporated safety standard), that all components are compliant, and that all such work happens under the general control of a registered person.

***Design and construction***

*5. (1) No person may authorise, design, install or permit or require the installation of an electrical installation, other than in accordance with a health and safety standard incorporated into these Regulations under section 44 of the Act.*

*(2) No person may use components within an electrical installation unless those components comply with the standards referred to in the relevant incorporated standard referred to in subregulation (1), and proof of compliance shall be identifiable on the components or certification shall be available from the manufacturer or supplier of the materials or components in terms of the National Regulator for Compulsory Specifications Act, 2008 (Act NO.5 of 2008).*

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*(4) A registered person shall exercise general control over all electrical installation work being carried out, and no person may allow such work without such control.*

3) In the event of the Munic making use of "Contractors", it must ensure that the contractor is duly registered as such with the Department of Labour.

***Electrical contractor***

*6. (1) No person may do electrical installation work as an electrical contractor unless that person has been registered as an electrical contractor in terms of these Regulations.*

*(2) Any person who does electrical installation work as an electrical contractor shall register annually in the form of Annexure 3 with the chief inspector*

4) It may not permit its employee or contractor to live up any installation or part (circuit / re- connected or newly connected appliance) thereof, whether new or altered, before a CoC for that has been issued.

***Commencement and permission to connect installation work***

8. -

*(2) No person shall connect or permit the connection of any completed or partially completed electrical installation to the electricity supply unless it has been inspected and tested by a registered person and a certificate of compliance for that electrical installation has been issued: Provided that the supplier may on request connect the supply to the electrical installation for the purpose of testing and the completion of the certificate of compliance by a registered person:*

*Provided further that this subregulation shall not apply in a case where the electricity was disconnected for the non-payment of the electricity account or where there has been a change of tenant but not of ownership.*

5) Only Registered person may issue a CoC, and if he detects a fault, may not, and if dangerous he must make it safe, and also he is obliged to report it to the Chief Inspector. It also burdens the person doing such work to ensure that a valid CoC is issued for all work done.

***Issuing of certificate of compliance***

*9. (1) No person other than a registered person may issue a certificate of compliance.*

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*(3) If at any time prior to the issuing of a certificate of compliance any fault or defect is detected in any part of the electrical installation, the registered person shall refuse to issue such certificate until that fault or defect has been rectified: Provided that if such fault or defect in the opinion of the registered person constitutes an immediate danger to persons in a case where electricity is already supplied, he or she shall forthwith take*

*steps to disconnect the supply to the circuit in which the fault or defect was detected and notify the chief inspector thereof.*

*(4) Any person who undertakes to do electrical installation work shall ensure that a valid certificate of compliance is issued for that work. registered person:*

It is in this field that the ECA and its membership specialises, and can assist and keep Munics on the right side of the Law!

All of our members are duly registered, both as Contractors and Persons, and deals with this type of installations and the certification thereof on a daily basis.

Such registrations are non-negotiable prerequisites requirements for membership of the ECA.

Our members are expected and proud to be:

- Duly registered
- Competent
- Accountable
- Dependable
- Reliable

We can assist in verifying that the contractor is compliant and a member in good standing before you commit into any contract, and if not provide the necessary guidance and assistance to get it right.

We have records, and keep such of all our members and many other contractors as well, and if they make use of our online CoC, we keep record of those as well.

Remember that you as utilities remains accountable as both supplier and as user.

### **3. Conclusion**

In terms of the legal requirements over and above the obvious Municipal end NERSA regulations, utilities need to also ensure compliance with the Occupational Health and Safety Act, Act 85 of 1993 (the OHSAct) and specifically the Electrical Machinery Regulations of 2011 and the Electrical Installations Regulations of 2009, as well as the SANS 10142-1 for all installations up to 1 000V, and the SANS 10142-2 for installations exceeding 1kV up to 22kV, not exceeding 3MVA, and have and obtain/manage CoC's for those.

With all of these Members of the ECA can and want to assist.

Using ECA Members provides your peace of mind, as we remain accessible and accountable.

Please feel free to visit our website <http://www.ecasa.co.za>, or contact any of our offices for more information.