Joint Statement
Electrical Contractors Association (ECA) and the Institute of Plumbing South Africa (IOPSA) Without Prejudice

Ensuring safe and compliant plumbing and electrical installations

In light of recent inquiries and to provide clarity within the industry, we are outlining the governance, regulations, and best practices surrounding electrical installations and especially in relation to the fixed storage water heater. This information is essential for industry professionals, consumers, and all stakeholders to ensure safety, compliance, and accountability.

Governance and legal framework for electrical installations

All electrical work is governed by the **Occupational Health and Safety Act** and its regulations. Compliance with relevant legislation, such as the Construction Regulations and the Electrical Installation Regulations, is mandatory. Key definitions include:

> **Installation Work:** Installation, extension, modification, or repair of an electrical installation, connection of machinery, and inspection/ testing for compliance certification.
>
> **Electrical Contractor:** An entity undertaking electrical installation work for others, excluding employees of that entity.
>
> **Electrical Installation:** Machinery used for electricity transmission within premises, excluding certain machinery like communication circuits and vehicle installations.

Regulations mandate that only competent persons, as defined by the Act, carry out such work. Specific provisions under the Construction Regulations emphasize the need for qualified personnel and stringent safety measures on construction sites.

Working on the electrical aspects of fixed hot storage water heaters

SANS 10254 is a compulsory South African National Standard covering the safe installation, maintenance, replacement and repair of fixed electric storage water heating systems requires that the electrical wiring system shall comply with SANS 10142-1 (Part 1: Low-voltage installations)

> ***SANS 10254 –4.4 Electrical installation***
> *The electrical wiring system* ***shall comply with SANS 10142-1 and*** *the water heater shall be connected to the electrical supply in an approved manner.*

Considering the Governance and Legal Framework for Electrical Installations as mentioned in point 1, only competent and qualified electricians, operating under the supervision of registered electrical contractors, may work on electrical aspects of fixed hot storage water heaters. This ensures that all work is performed safely and in compliance with regulations.

The role of the qualified plumber in electrical work

The plumbing curriculum and trade test doesn't include training and testing for electrical competencies and the same is true for the electrical trade test which excludes plumbing competencies aspects.

Plumbers, unless registered as qualified electricians, must not perform electrical installation work. Instructing a plumber or any other person/s to do electrical work for which they are not competent is strongly discouraged and may place the plumber in a situation where he breaks the law, not only is it illegal but may result in unsafe installations that may lead to end users being exposed to serious risks such as fires, shocks, injury and death. Failing to comply may result in severe penalties, fines and imprisonment.

Relocating geysers and Electrical Compliance Certificates

Relocating a fixed storage water heater (geyser) requires a qualified electrician to calculate necessary specifications, testing and issue a new Certificate of Compliance (CoC) for the electrical aspect of such installation. This ensures all work adheres to safety and compliance to the standards, maintaining accountability for any modifications made. Additional to this the Qualified Plumber would need to relocate the water infrastructure and certify its correctness.

Temporary electrical work by plumbers

Plumbers cannot legally disconnect, remove or reconnect electrical work at a hot storage water heater (geyser), even temporarily. Such actions must be performed by a registered electrician to ensure compliance and safety. Plumbers must remain vigilant and avoid compromising safety regulations to protect themselves and the end users.

PV / DC Control Systems including timers and other control units.

The installation of Photovoltaic (PV) and DC control systems, including those connected to geysers, falls under electrical installation work. Only qualified electricians should handle these systems, ensuring the safety and reliability of the installations. An Electrical Certificate of Compliance (CoC) for the electrical installation must be issued on such installations.

Issue of supplementary electrical certificate of compliance (COC)

A supplementary electrical CoC is required for any electrical work carried, including the geyser replacement and thermostat changes which would constitute connection or disconnection or the appliance at its terminals, to certify compliance with safety standards.

This measure ensures accountability and traceability for all electrical work performed, leads to safer installations with aim of safeguarding the consumer and end user.

Addressing electrical shocks at terminal fittings

If consumers experience electrical shocks when using water fixtures, a qualified electrician must be immediately called to investigate and resolve the electrical issue, which often involves electrical fault finding using specialised equipment, testing for things such as correct earthing and bonding.

Typically, if there is an increased potential (Voltage) the fault typically would lie on the electrical side of an installation and thus an Electrician would be the first point of call.

Health and Safety should never be compromised and in all cases a qualified electrician must be called to investigate, resolve and work on all electrical issues.

Importance of proper bonding and earthing

Proper bonding and earthing are crucial for maintaining electrical safety. These tasks must be performed and tested by qualified electricians using specialized equipment to ensure a compliant installation. Accountability for these critical safety measures cannot and should never be compromised.

Many believe this task to be a simple connection of 2 wires, but the theory and practical application behind it stems much deeper. Earthing is verified by means of a test carried out and needs to be sufficient to carry fault current back to the source, where bonding is a principle of equal potential verified by means of a test to ensure all the accessible parts of low enough resistance to ensure equalisation.

Regulations mandate that only competent persons, as defined by the Act, carry out such work. Specific provisions under the Construction Regulations emphasize the need for qualified personnel and stringent safety measures on construction sites.

The responsibility of ensuring safety

It is to be acknowledged that safety and accountability are paramount in both electrical and plumbing work including other industries. We therefore urge all stakeholders, users and interested parties to adhere to adhere to the Occupational Health and Safety Act and its regulations including all relevant South African National Standards and local authorities.

Ensuring compliance, having the competency and maintaining a high standard of safety is the most responsible approach to preventing accidents, reduce risks, achieving a safer working environment and safeguarding our communities and families.

The above should not discourage Plumbers or Contractors from work but instead motivate for more multi-faceted artisans which ensures the person doing the work possess the correct competency and can carry the work out safely. We look forward to a safer industry where our industries can support each other.

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