



Gas Practitioner Scope & Competency Biogas Applications

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Policy

***Compiled by:
Elrien Boothe***

***Approved by:
Roy Lubbe***

***Address written comments or suggestions to the
Board of Directors***

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1. INTRODUCTION

An Authorised Person as mentioned in the Pressure Equipment Regulations (PER) is referred to in the Gas Industry as a Gas Practitioner who is registered with the Southern African Gas Association (SAGA) and licensed via the South African Qualification and Certification Committee for Gas (SAQCC Gas) to conduct work in one or more areas whichever is applicable in the domestic, commercial, industrial and specialised gas environments:

- Design
- Installation
- Maintenance
- Repair
- Commissioning
- Recommissioning

***NB!** Kindly take notice that attendance and completion of the required training course is not in itself sufficient to obtain registration as an authorised gas practitioner in one or more of the various categories of registration. Accordingly, it is imperative that one read and be guided by this Gas Practitioner Scope and Competency Policy with regards to all registration requirements applicable. Should there be any outstanding documentation needed for the processing of the application not received within 3 months of date of receipt of the application, it will be deemed null and void and applicant will forfeit the full course and registration fee*

2. DEFINITIONS

Reference “Guidance Notes to the Pressure Equipment Regulations July 2009” as amended.

- 2.1 “Fluid”** means gases, liquids, vapours in pure phase and mixtures thereof and may contain solids in suspension.
- 2.2 “Gas”** means gases, liquefied gases, gases dissolved under pressure, vapours and those liquids whose vapour pressure at the design temperature is greater than 50 kPa above normal atmospheric pressure.
- 2.3 “Gas reticulation system”** means the conveyance of gas by pipeline from or within a property boundary up to and including the ultimate points of consumption
- 2.4 “Gas system”** means reticulation and or recirculation including all related **piping, pressure and safety accessories** excluding a transportable gas container connected to the system, distribution, transmission pipelines and process plants.

3. ACRONYMS

ASME	American Society of Mechanical Engineers
CNG	Compressed Natural Gas
CoC	Certificate of Conformity
ISO	International Organisation for Standards
NG	Natural Gas
NGV	Natural Gas Vehicles
NQF's	National Qualifications Framework
OEM	Original Equipment Manufacturer
PER	Pressure Equipment Regulations
P & ID	Piping and Instrumentation Diagrams
PoE	Portfolio of Evidence
PRU	Pressure Reduction Unit
SAGA	Southern African Gas Association
SANS	South African National Standards
SAS	Safe Appliance Scheme
SAQCC	South African Qualification and Certification Committee
SGES	Safe Gas Equipment Scheme

4. **PRE-REQUISITE REQUIREMENTS FOR FIRST TIME REGISTRATION OF BIOGAS PRACTITIONERS FOR DOMESTIC, COMMERCIAL AND INDUSTRIAL APPLICATIONS**

Criteria for **Biogas practitioners'** registration forming part of the Portfolio of Evidence (POE) included but not limited to:

- i) Minimum required period of years working on gas and gas systems with sufficient exposure to and experience for Domestic 1 year; Commercial 2 years & Industrial 3 years in the applicable gas environment.
- ii) An acceptable standard of secondary education (NQF's) minimum level NQF1 (literacy & math's). Qualifications, technical education, or achievements with reference to the Biogas industry with proof of all education provided.
- iii) The career path for domestic/commercial will be the successful completion of the course based on SANS 827 followed by SANS 1753-1 and for industrial will be the successful completion of the course based on SANS 13577 followed by SANS 1753-2.

- iv) Past and present employment with an existing gas supply or gas system installation company.
- v) Detailed description and applicable supporting documents of the latest category related biogas projects and or gas installations done by the applicant including the magnitude, scope and level of specific responsibility for actual installations need to be provided. If a practitioner designed the gas system, proof of designs. The assessment of at least 2 of these installations needs to be ensured by means of copies of P& ID and photos in support prior to registration.
- vi) Proof of supervision, under whose supervision did you work during the period of installation and provide proof of CoC's issued while under supervision substantiating your involvement.
- vii) Signature recommendation from present Line Manager or Supervisor in support of the respective licensing category applied for.
- viii) A single or combination of the registration categories applied for could be granted depending on qualifications, knowledge, experience, expertise and work done as per the Portfolio of Evidence provided.
- ix) Recognition for prior OEM and international training. Any other additional biogas related training with proof to be provided.
- x) Attend required training course and pass with an average of 80%.

5. PRE-REQUISITE REQUIREMENTS FOR RE-REGISTRATION OF BIOGAS PRACTITIONERS (3 YEAR CYCLE) FOR DOMESTIC, COMMERCIAL AND INDUSTRIAL APPLICATIONS

Criteria for re-registration of Biogas practitioners include:

- i) Description of past and present employment with an existing gas supply or system installation company.
- ii) Signature recommendation from present Line Manager or Supervisor in support of the respective licensing category applied for.
- iii) Motivation of additional category licensing, when requested.
- iv) List of last 5 projects supported by means of CoC's issued by the gas practitioner. Magnitude, scope and level of specific responsibility as to the gas projects/actual gas installations to be provided. The assessment of at least 2 of these installations could be undertaken prior to re-registration should it be deemed necessary.
- v) It is imperative that gas practitioners build up their portfolio by keeping records of all gas work done so when applying for renewal of the gas licence the portfolio of evidence is reflective of the past three years ensuring efficient renewal of the gas licence. Failing to provide CoCs as supporting documentation may result in a shortcoming in the review process and delay in the renewal of the license.
- vi) Attend required training course and pass with an average of 80%.

6. CATEGORIES FOR BIOGAS PRACTITIONERS:

6.1 DOMESTIC

A Domestic biogas practitioner is licensed to carry out installations at **domestic (residential) premises only (Production, Storage and Gas Treatment)**. **Biogas installations shall comply with SANS1753-1**. The following individual categories are applicable for domestic applications:

- **Design of a gas system** - Design, layout and planning of the gas reticulation system.
- **Installation of gas system and appliances** – The installation of piping, appliances (stoves, hobs, geysers etc.) and equipment (digester)
- **Maintenance and Repair of gas system and appliances** – All maintenance done on piping, appliances (stoves, hobs, geysers etc.) and equipment (digester)
- **Commissioning of gas system and appliances** - Commissioning the new gas system from the meter to the installed appliances after being pressure tested and providing a Certificate of Conformity confirming the gas system and appliances comply to SANS 1753-1 are safe and fit for purpose.
- **Re-Commissioning of gas system and appliances** - When piping and or an appliance is replaced and the system restarted after alterations, maintenance or modifications has been done the system needs to be re-commissioned by a registered gas practitioner after being inspected and pressure tested and providing a Certificate of Conformity in line with SANS 1753-1 and and PER and is safe and fit for purpose.

Excluded activities and not licensed within the scope of registration are

- Any Natural Gas / LP Gas domestic installations, or
- installation at any commercial or business premises of any type including;
 - restaurants, cafes, coffee shops, commercial kitchens, schools hospitals or care facilities or any such premises where gas is used for cooking or heating, or
 - business premises such as offices, shops, warehouses, or any premises in a shopping Centre or mall, or
 - multilevel /multi-occupancy residential dwelling (e.g. block of flats with a remote, communal or meter gas supply points.

Scope of Competency as per SAQCC Gas registration for domestic biogas practitioners will be:
“The holder of this card is authorised for design, installation, maintenance, commissioning /re-commissioning of a gas system as per SANS 1753-1.”

NB! A single or combination of the categories could be granted depending on qualifications, knowledge, experience, expertise and work done as per Portfolio of Evidence provided.

After construction, replacement, maintenance, repair, modification, and commissioning/re-commissioning a Certificate of Conformity shall be issued for specific scope of work performed.

Biogas Certificate of Conformity (CoC) is downloadable from the SAQCC Gas digital CoC App via Android, iOS and Huawei.

6.2 COMMERCIAL

A Commercial gas practitioner is licensed to carry out domestic (residential) installations and installations on commercial premises only (Compression Biogas Cylinder Restaurants / Multi-dwellings / Hotel / Hospitals). Such installations shall comply with SANS1753-1. The following individual categories are recorded for commercial applications:

- **Design of a gas system** - Design, layout and planning of the gas reticulation system.
- **Installation of gas system and appliances** – The installation of piping, digester and associated equipment including appliances (stoves, hobs, geysers etc.)
- **Maintenance and Repair of gas system and appliances** – All maintenance done on piping, appliances (stoves, hobs, geysers etc.) and equipment (digester)
- **Commissioning of gas system and appliances** - Commissioning the new gas system from the digester to the respective appliances needs to be done by a registered gas practitioner after being pressure tested and providing a Certificate of Conformity confirming the gas system and appliances comply to SANS 1753-1 and the systems is safe and fit for purpose.
- **Re-Commissioning of gas system and appliances** – When the gas system needs to be restarted after maintenance, repair, alterations or modifications has been done the system needs to be re-commissioned by a registered gas practitioner after being inspected and pressure tested and providing a Certificate of Conformity in line with SANS 1753-1 and PER and is safe and fit for purpose.

Excluded activities are

- any Natural Gas / LP Gas commercial installations, or
- installation of bulk LP Gas tanks
- maintenance of bulk tanks and associated equipment
- installation at any industrial premises of any type

Scope of Competency as per SAQCC Gas registration for Commercial Biogas Practitioner will be: “ *The holder of this card is authorised for design, installation, maintenance, commissioning and re-commissioning of a gas system as per SANS 1753-1.*”

NB! A single or combination of the categories could be granted depending on qualifications, knowledge, experience, expertise and work done as per Portfolio of Evidence provided.

After construction, replacement, maintenance. repair, modification, and commissioning/re-commissioning a Certificate of Conformity shall be issued for specific scope of work performed.

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6.3 INDUSTRIAL

An Industrial Biogas Gas Practitioner is licensed to carry out industrial installations on business premises (Production and storage / Treatment, compression and storage (PRS)). Such installations shall comply with SANS 1753-2.

The following individual licensing categories are recorded for industrial biogas applications:

- **Design of a Biogas System** - Design, planning and layout of the gas system inclusive the production and storage and or treatment, compression and storage
- **Installation of Biogas System and Equipment** – Installation of piping and equipment as part of complete gas system
- **Maintenance and Repair of Biogas System and Equipment** – All maintenance and repair done on piping and equipment
- **Commissioning of Biogas System and Equipment** - Commissioning the new gas system from the digester to the respective application needs to be done by a registered gas practitioner after being pressure tested and providing a Certificate of Conformity confirming the gas system and appliances comply to SANS 1753-2 and the systems is safe and fit for purpose.
- **Re-Commissioning of Biogas System and Equipment** - When the gas system needs to be restarted after maintenance, repair, alterations, or modifications has been done the system needs to be re-commissioned by a registered gas practitioner after being inspected and pressure tested and providing a Certificate of Conformity in line with SANS 1753-2 and PER and is safe and fit for purpose.

Excluded activities are

- any SANS 13577 installation
- the installation of bulk LPG tanks, associated pipework, and equipment in accordance with the requirements of SANS10087-3 and any other applicable legislation, and
- the installation of Natural Gas and or LP Gas fuel and combustion equipment and all required burner management and control systems as per SANS 13577
- fit and maintain required ancillary equipment to LPG road tankers in accordance with the requirements of SANS 10087-4 and any other applicable legislation.
- installation of any domestic or commercial installation at any business premises of any type

Scope of Competency as per SAQCC Gas registration for a Biogas Practitioner will be: *‘The holder of this card is authorised for design, installation, maintenance, repair, commissioning and re-commissioning of a gas system as per SANS 1753-2.’*

NB! A single or combination of the categories could be granted depending on qualifications, knowledge, experience, expertise and work done as per your Portfolio of Evidence provided.

After construction, replacement, repair, modification, and commissioning/re-commissioning a Certificate of Conformity shall be issued for specific scope of work performed.

Biogas Certificate of Conformity (CoC) is downloadable from the SAQCC Gas digital CoC App via Android, iOS and Huawei.

7. LEGISLATION AND BEST PRACTICE

The practitioner needs to clearly understand the content of the following:

- i. Occupational Health and Safety Act
- ii. Pressure Equipment Regulations R734 (PER)
- iii. Rules Governing the Safe Gas Equipment Scheme (SGES)
- iv. Health and Safety Standards relevant to gas type applications
- v. SAGA Technical Bulletins
- vi. Code of Good Practice for Gas Practitioners
- vii. Terms & Conditions for Training
- viii. Antitrust Policy and Meeting Rules
- ix. Certificate of Conformity (CoC) per application level
- x. Pressure Test Certificate per application level

8. RELATED DOCUMENTS

- i. Biogas Practitioner Application
- ii. Respective CoC's