



Zwartkop Golf Estate Home Owners Association

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REQUIREMENTS FOR **SMALL-SCALE** **EMBEDDED** **GENERATION**

Guidelines to apply for permission to
install Grid-Tied SSEG

*(This document makes reference to SSEG
Requirements and Application Process – Version
2/2023)*

INTRODUCTION

The SSEG-GT-A (Appendix 6) application form (found in the *REQUIREMENTS AND APPLICATION PROCESS FOR SSEG – VERSION 2/2023*) must be completed for all forms of grid-tied embedded electricity generation, including renewable energy and cogeneration. This form deals with applications for approval to install small-scale embedded generation plants. (Off-Grid installations must be declared as laid out in Section 6).

The forms are available on the ZHOA website. The text box below highlights some important points to consider before applying.

Purchasing your equipment: SSEG equipment that is to connect to the grid must comply with all regulatory requirements and national standards. It is therefore important for customers to be familiar with these requirements **before purchasing the equipment**. This is of relevance to the inverter. Specific technical information and certificates are required for submission with the initial application form. It is the responsibility of the customer to ensure that the equipment complies with the required standards.

Where there is no existing electricity service connection: Where an SSEG is to be connected at a location where there is currently no connection to the utility network, an “Application form for new electricity supply service” should be submitted simultaneously as a separate document to the SSEG application form. This application form can be found on the ZHOA website.

Future expansion: Consent to connect the SSEG to the electricity grid is only granted for the declared generation capacity. Customers wishing to increase the capacity of their generation or make changes to their current installation must obtain approval for the expansion or change. The application must again be made through the submission of a completed SSEG-GT-A (Appendix 6) application form and required documents.

Professional sign-off: As detailed on page 11, the final installed SSEG system must be signed off on commissioning as complying with ZHOA requirements by a professional engineer or technologist registered with ECSA. For more information regarding professional personnel, visit: <https://www.ecsa.co.za/default.aspx>

STEP 1: COMPLETE SSEG-GT-A APPLICATION FORM

Visit the ZHOA website and download the relevant application form/s as noted above. Alternatively, the forms are obtainable from the ZHOA office situated at 16 Old Johannesburg Road, Clubview. The SSEG-GT-A form must be filled in for all installations which are to be grid-tied. ZHOA requires that the application form/s to be signed by the property owner. Details of the proposed installer must also be provided. The property owner may need support from the proposed installer or a professional.

STEP 2: PROVIDE ZHOA WITH DETAIL OF THE PROPOSED INSTALLATION

ZHOA requires both basic and technical information of the proposed SSEG project to ensure that all SSEG connections are done safely and legally and in compliance with all requirements.

STEP 3: PROVIDE ZHOA WITH A COPY OF THE PLANNED CIRCUIT DIAGRAM

ZHOA requires a copy of the planned circuit diagram signed by an ECSA registered Technician / Engineer (Discipline: Electrical)

Preliminary design: a simple circuit diagram showing major system components and point of common coupling (PCC) must be provided **and signed off by an ECSA registered technician / engineer**

Earthing arrangement: this must be in accordance to SANS 10142-1. Earthing requirements for common earthing systems are described in NRS 097-2-1.

Various electrical parameters of the system: these sections require information on the electrical specifications of the SSEG system.

System protection detail: this includes information about the synchronizing method, anti-islanding, power quality, etc.

Proposed peak power generation output: maximum power expected to be generated must be detailed in the application form. This must be within the maximum power limits given earlier in this document.

STEP 4: OBTAIN PERMISSION FROM ZHOA

SSEG installations will require prior approval from the estate HOA. Note that photovoltaic (PV) SSEG applications will first require aesthetical approval from the HOA. Applications to connect to the grid will not be considered until all relevant approvals have been obtained. All applicable documentation must attach to the application.

STEP 5: SUBMIT COMPLETED APPLICATION FORM AND ATTACHMENTS

Once the relevant forms ("SSEG-GT-A", Appendix 6) and PV specification / NRS certification of the system have been completed and consent has been obtained from the relevant HOA, the form must be submitted to ZHOA together with the system details. (Old Johannesburg Rd, Clubview Centurion)

STEP 6: ZHOA ISSUES "PERMISSION TO INSTALL" LETTER

After due consideration of the application, the applicant will be informed in writing whether the application has been successful. Once notified by means of a "Permission to Install" SSEG-L1 letter of a successful application, the applicant may commence installation. The successful applicant may now commence with installation and commissioning of the SSEG system.

Once fully installed, the system is ready for testing and commissioning by the SSEG installer. Note that permanent connection of the SSEG system to the electricity grid is only permitted on receipt of written permission from ZHOA.

The Supplemental contract must be completed. This is a legally required contract that governs the relationship between ZHOA and the customer. The contract is valid for 1 year and can be renewed annually.

STEP 7: COMMISSIONING DOCUMENTATION TO BE SUBMITTED TO ZHOA AND BOOK INSPECTION

As detailed on page 11, the commissioning of the system must be undertaken by ECSA-registered Pr. Eng., Pr. Tech. Eng., Pr. Cert. Eng., or Pr. Tech. Eng., who must complete and sign off the ZHOA SSEG Commissioning Test Certificate

In addition to the Commissioning Report, the following documentation must also be completed and submitted to the ZHOA office:

- Copy of final as-built circuit diagram, signed by an ECSA registered technician/engineer.
- An electrical installation Certificate of Compliance as per SANS 10142-1.
- A signed Supplemental Contract for Embedded Generation.

ZHOA will inspect the installation. (For any re-inspection due to faults in the installation, ZHOA will charge a re-inspection fee)

STEP 8: ZHOA ISSUES “APPROVAL” LETTER ON COMPLIANCE

If a change to the metering is required, ZHOA will install and commission the new meter. If all of the above is satisfactory, ZHOA will issue a “Commissioning Approval SSEG-L2” letter.

STEP 9: CUSTOMER PLACED ON APPROPRIATE TARIFF AND GENERATION COMMENCES

The customer will be placed on the appropriate tariff which will be applied from the date the grid tie meter was commissioned, or if no change was required, from the date of issue of the Commissioning Approval Letter.

Should an expansion or a change to the system be required, a new application (SSEG-GT-A, Appendix 6) must be completed. (This includes the change of property ownership)