



ELECTRICITY SERVICES

MBM/SSEG

APPLICATION FOR THE CONNECTION OF EMBEDDED GENERATION

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This application form for the connection of embedded generation is for small-scale embedded generators to be installed by residential, commercial or industrial customers in the Mossel Bay Municipal Area. It is applicable to all forms of embedded electricity generation, including renewable energy and co-generation.

- A separate "Application for a new or modified electricity supply service" form must also be completed, except for installations where reverse power blocking is to be installed.
- If the embedded generator is to be configured as a standby supply after islanding from the utility supply, the generator will have to be connected to the existing internal wiring of the property. In such a case, the property owner must obtain a certificate of compliance from a qualified electrician.

Submit completed form to:

Customer Support Services		
Technical Services	Civic Centre 101 Marsh Street Mossel Bay 6505	Tel: (044) 606 5000 Fax: (044) 606 5062 admin@mosselbay.gov.za

Property name and location:

Project name:	SOLAR POWER SYSTEM AT RESIDENCE
Erf number:	794
Physical address:	17 MOSSEL STREET
Suburb / Farm:	FRAAI UITSIG

Name & account number of property owner:

(Only if embedded generation is to be connected to the Mossel Bay Municipality's electrical network)

First Name:	HERMAN	Last Name:	CLAASSENS	Title:	MR
Municipal account number	280007940051		Contract account number:		



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Property owner contact details:

Telephone (Home):	083 417 7726
Telephone (Work):	-
Cell no.:	083 417 7726
Fax:	-
E-mail:	VONK.CLAASSENS@GMAIL.COM
Postal Address (incl. Postal Code)	PO BOX 109 6503

Application type:

(Tick appropriate box)

Residential	<input checked="" type="checkbox"/>
Commercial / Industrial	<input type="checkbox"/>
New	<input checked="" type="checkbox"/>
Revised application	<input type="checkbox"/>
Upgrade existing system	<input type="checkbox"/>
Change of property owner	<input type="checkbox"/>
Other (specify)	<input type="checkbox"/>

Planned construction schedule:

Project construction start date:	12 JAN 2023
Project commissioning date for embedded generation:	12 JAN 2023

Mode of embedded generation:

(Tick appropriate box)

Energy from embedded generation to be used with the consumer's electricity network and no excess energy to be exported to the Mossel Bay Municipality's electrical network (reverse power blocking installed).	<input checked="" type="checkbox"/>
Energy from embedded generation to be used with the consumer's electricity network and excess energy to be exported to the Mossel Bay Municipality's electrical network (no reverse power blocking).	<input type="checkbox"/>
Energy from embedded generation to be used solely for exporting to Mossel Bay Municipality's distribution network.	<input type="checkbox"/>



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Energy from embedded generation to be used solely for wheeling to third party through Mossel Bay Municipality's distribution network.

Small-scale embedded generation type:

(Tick appropriate box)

Photo-voltaic (PV Solar)	<input checked="" type="checkbox"/>
Concentrated solar	<input type="checkbox"/>
Small-scale hydro	<input type="checkbox"/>
Landfill gas	<input type="checkbox"/>
Biomass	<input type="checkbox"/>
Biogas	<input type="checkbox"/>
Wind	<input type="checkbox"/>
Co-generation	<input type="checkbox"/>
Other (specify)	<input type="checkbox"/>

Type of energy conversion:

(E.g. synchronous generator, induction generator, inverter, fuel cell, etc.) Include operating characteristic

INVERTER

Battery storage:

(Tick appropriate box)

Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Capacity (Amp-hours)	10kWh/100Ah		

Make & model of key generating equipment:

Item 1 (description):	
Manufacturer:	SUNSYNK
Model:	SUNSYNK-5K-SG01LP1
Number of units:	1x 5kW
Single / three phase	SINGLE
Item 2 (description):	
Manufacturer:	
Model:	
Number of units:	
Single / three phase	



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Site location:

Latitude (dd mm sss)	S	3	4	.	0	4	.	4	2	"
Longitude (dd mm sss)	E	2	2	.	0	9	.	2	1	"
For commercial/industrial only (show location and dimensions of intended installation infrastructure in relation to the existing property point of connection and buildings).										

Site land-use zoning type:

RESIDENTIAL

Preliminary design ⁽¹⁾:

(To be attached to this application)

Circuit diagram and design showing major components, proposed point of common coupling, isolating and interfacing devices with Mossel Bay Municipality's electrical network, protection schemes, consumer network, operating characteristics, etc.	SEE ATTACHED
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System earthing arrangement:

Earthing arrangements i.e. TN-C-S	TN-C-S
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Total capacity of embedded generation (kVA and PF):

(Attach schedule for each unit if more than one generation unit will be installed on the property)

Total installed capacity (kVA or kW peak)	2.55 kW
Power factor (per unit)	1

Property bulk supply circuit breaker rating:

Current Rating (Ampere)	60A
Number of Phases (single- or three-phase)	SINGLE

⁽¹⁾ For guidance in this regard it is recommended that an installer/supplier be consulted.



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Estimated consumption and generation levels:

(Complete the table below)

Month	Estimated imported energy for the month (kWh) (Electricity bought from utility once SSEG is installed)	Estimated exported energy for the month (kWh) (Electricity generated by SSEG and not utilised for own use)	Estimated maximum instantaneous exported power (kVA)	Day of week that maximum power export occurs	Time of day that maximum power export occurs
January	2 kWh	X			
February	2 kWh				
March	2 kWh				
April	2 kWh				
May	2 kWh				
June	2 kWh				
July	2 kWh				
August	2 kWh				
September	2 kWh				
October	2 kWh				
November	2 kWh				
December	2 kWh				
Total	24 kWh			N/A	N/A

Brief explanation of the reasons for the general load profile and electricity export profile as mentioned above



Electrical parameters for SSEG system:

Rated system voltage (V)	230 V
Maximum reactive power limit (kVAR)	1
Maximum peak short-circuit current (A)	21.74 A

Electrical parameters for unit transformer (if applicable):

Rated voltages (primary/secondary)	N/A
Power rating (kVA)	
Winding configuration	
Method of grounding (solid, NER, NECR)	
Impedance	

Point of coupling:

(Only where applicant is not an existing customer)

Attach a single line diagram, indicating the point of connection to the Mossel Bay Municipality's electrical network.	EXISTING
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Protection & control scheme details ⁽²⁾:

Method of synchronization (auto/manual, make and type of relays, etc.)	AUTO AG COUPLING. INVERTER TESTS INTERNALLY INCLUDING ISOLATION RESISTANCE BEFORE CONNECT.
Method of anti-islanding (detail of scheme, type of relays, etc.)	INTERNAL ANTI-ISLANDING
Method of generator control (AVR, excitation, type of relays, etc.)	N/A.
Other main protection to be applied: (O/C, E/F, over/under voltage, over/under frequency, reverse power, back-up impedance, generator transformer back-up earth fault, etc.)	O/C OVER/UNDER VOLTAGE OVER/UNDER FREQUENCY

⁽²⁾ For guidance in this regard it is recommended that an installer/supplier be consulted.



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Clearance from other Mossel Bay Municipal Departments:

FUNCTION	DEPARTMENT	COMMENTS	NAME	SIGNATURE	DATE
Zoning/sub-division/building plans	Planning and Building Development				
Noise impact assessment and ventilation	Health				
Air pollution and air quality (fuel burning)	Health				

Note:

1. Electricity Services will require prior approval from these departments. Applications to connect to the grid will not be considered until all relevant approvals have been obtained.
2. Photovoltaic (PV) SSEG applications will require approval from only Planning and Building Development Management if:
 - a. Rooftop installations: PV panel(s) in its installed position projects more than 1.5m, measured perpendicularly, above the roof and/or projects more than 600mm above the highest point of the roof;
 - b. Installations on the ground: PV panel(s) in its installed position projects more than 2.1 metres above the natural/finished ground level.

Installer details:

Name of installer:	COMPOWORKS / HIGHCELL SOLAR SOLUTIONS		
Accreditation / qualification:	INSTALLATION ELECTRICIAN		
Professional registration:		Reg.no	
Physical Address:	33 MEEU 4 DAL SEEMEEDU PARK MOSSSEL BAY 6500		
Postal Address:	AS ABOVE		
Contact person:	JACOB PETRUS BENADE		
Telephone no:	Office:	Cell:	061 619 4742
Email address:	JAPBENADE@GMAIL.COM		



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I request Mossel Bay Municipality's Electricity Services Department to proceed with the review of this embedded generation interconnection application. I understand that:

- I will have to pay for both in-house and outsourced engineering studies conducted as part of this review, should these be required; and
- A quotation for such work will be provided beforehand, giving me the opportunity to cancel or modify the application should I wish to do so.

I further consent to Mossel Bay Municipality providing this information to the National Transmission Company and other Distributors as required.

Application completed by:

Name:	HERMAN			
Surname:	CLAASSENS			
Title:	MR			
Physical Address:	17 MOSSEL STREET FRANLUTSIG			
Telephone no:	Office:	-	Cell:	0834177726
Email address:	VONK.CLAASSENS@GMAIL.COM			

ECSA registered professional:

Name:				
Professional registration:		Reg.no		
Contact person:				
Telephone no:	Office:		Cell:	
Email address:				

(Note: Sign-off by an ECSA registered professional is optional at application stage, however it is recommended that an ECSA registered professional engineer or professional technologist that is familiar with the technical details of the intended generation technology, complete this application form)

Signed (Applicant):

Signed (Property owner):

Date: _____

Date: _____



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FOR OFFICE USE

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Date application received:

Application notification no:

Further information required:

(e.g. Competent person detail required in terms of OHSA, General Machinery Regulations, etc.)

YES		NO	
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Date received:

More detailed studies required:

(e.g. fault level, voltage rise, harmonics, protection, voltage stability, etc.)

YES		NO	
-----	--	----	--

Date completed:

Approved in Principle:

YES		NO	
-----	--	----	--

Date applicant informed:

Copy to Planning Section:

YES		NO	
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Date completed:

TEST REPORT (see 8.6 for guidelines)

FOR ALL GENERAL ELECTRICAL INSTALLATIONS TO SANS10142-1
Register your CoC & Test Report at <https://ecb.org.za/coc>

Certificate Of Compliance (CoC) No. ECB2066970	DB/Supply No:	Date of Issue:
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IMPORTANT NOTE: SOUTH AFRICAN LEGISLATION STATES THE USER OR LESSOR IS RESPONSIBLE FOR THE SAFETY, SAFE USE AND MAINTENANCE OF AN ELECTRICAL INSTALLATION.

NOTE 1 - This report covers only the part of the installation described in Section 3.
NOTE 2 - This report covers the circuits for fixed appliances but not the actual appliances.
NOTE 3 - Medical and hazardous user locations require additional test reports (see 8.7).
NOTE 4 - Enter the required information or tick the appropriate block.
NOTE 5 - It is suggested that the CoC Number be attached to the distribution board (DB).
NOTE 6 - Regulations are not made retrospective.
NOTE 7 - In most circumstances this test report should be accompanied by annex pages for circuits, earth continuity and ideally wiring diagrams and photographs. Please query if not the case.

SECTION 1 - LOCATION Only required if not provided on Certificate of Compliance

Physical address:
Name of building and/or location of installation:

SECTION 2 - ABOUT THE INSTALLATION

Type of electrical installation system	<input checked="" type="checkbox"/> Permanent Installation TN-S TN-C-S	<input type="checkbox"/> Temporary Installation TN-C TT	<input type="checkbox"/> Common area for multiple users (sectional title) <input checked="" type="checkbox"/> Supplier's earth is functional
Characteristics of supply			
Voltage	<input checked="" type="checkbox"/> 230 400	<input type="checkbox"/> 525 Other: _____	Volts
Frequency	<input checked="" type="checkbox"/> 50Hz Other _____	Hz	D.C.
Number of phases	<input checked="" type="checkbox"/> One Two	<input type="checkbox"/> Three	Phase rotation: _____ Clockwise Anti clockwise NA
Main switch type	<input type="checkbox"/> Switch Disconnector (no-load isolator) Fixed Switch	<input checked="" type="checkbox"/> Circuit Breaker	Earth Leakage Circuit Breaker Earth Leakage Switch Disconnector
Number of poles	<input checked="" type="checkbox"/> 2	Current rating <input checked="" type="checkbox"/> 20	Amps Short circuit/withstand rating <input checked="" type="checkbox"/> 60 kAmps
Rated earth leakage tripping current (I _{Δn})	<input type="checkbox"/> 30 mA Other _____	mA	
Is surge protection installed? (see 8.7.4 and annex B)	<input checked="" type="checkbox"/> Yes	No	
Is lightning protection installed? (see 6.2.8 and annex C)	<input type="checkbox"/> Yes	No	<small>If applicable, complete Table C.10 Lightning protection system installation safety report</small>
Is an alternative power supply installed? (see 1.12)	<input checked="" type="checkbox"/> Yes	No	If Yes: Generator kVA &/or <input checked="" type="checkbox"/> UPS <input type="checkbox"/> S.S. kVA
Is any part of installation a specialised electrical installation?	<input type="checkbox"/> Yes	No	<small>If Yes, complete additional specialised test report (see 8.7 of SANS 10142-1 - Wiring of Premises)</small>
Is any part of the installation at a voltage above 1 kV?	<input type="checkbox"/> Yes	No	<small>If Yes, competent person must approve design and additional test reports (see 8.1.5 and SANS 10142-1)</small>

SECTION 3 - DESCRIPTION OF INSTALLATION COVERED BY THIS REPORT Include annex pages for additional notes, specification references, wiring drawings, etc. to represent all applicable information of work done

NUMBER OF CIRCUITS OR POINTS	New		Existing		NUMBER OF APPLIANCES, EARTH LEAKAGE & OTHER	New		Existing	
	Lighting	Other	Lighting	Other		Cooking	Geyser	Pool pump	Borehole pump
Lighting circuits					Fixed appliance circuits				
Lighting points					Other circuits or points				
Socket outlet circuits					Other circuits or points				
Socket outlets					No. of socket outlets protected by earth leakage				
Transformer circuits					The Earth Leakage				
Air-conditioning circuits					Protects:				
Heating circuits					Is there photographic evidence? (at least of the DB)				
Fan circuits									
Alternative power supply connections									

IMPORTANT NOTE: Items not tested must not be ignored and must be on an annex page to this test report. Contact the ECB for annex page templates.

SECTION 4 - INSPECTION AND TESTING OF NEW AND EXISTING INSTALLATIONS Annex pages are likely needed to accompany the test information below

1. Conductors are of the correct rating and current-carrying capacity for the protective devices and connected load	<input checked="" type="checkbox"/> Yes	No	N/A
2. Components have been correctly selected and installed	<input checked="" type="checkbox"/> Yes	No	N/A
3. Disconnecting devices are correctly located and all switching correctly switches the phase conductors	<input checked="" type="checkbox"/> Yes	No	N/A
4. Circuits, fuses, switches, terminals, earth leakage units, circuit breakers, distribution boards are correctly and permanently marked or labelled	<input checked="" type="checkbox"/> Yes	No	N/A

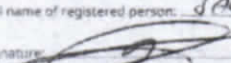
TESTS	UNITS	READING	INSTRUMENT	IS COMPLIANT?	
1. Continuity of bonding	Ω			<input checked="" type="checkbox"/> Compliant	N/A
2. Resistance of earth continuity conductor at ALL points of consumption: (see annex pages for list all)	Ω			<input checked="" type="checkbox"/> Compliant	N/A
3. Continuity of ring circuits: (see annex page if applicable)					N/A
4. Earth loop impedance test at: main or local switch: (see annex page if applicable)	Ω				N/A
5. Neutral loop impedance test at: main or local switch: (see annex page if applicable)	Ω				N/A
6. Prospective short circuit current at: main or local switch (PSCC) (see annex page if applicable)	kA			Calculated or Measured	
7. Elevated voltage between incoming neutral and external earth: (grounded supply load, measure and record)	V				
8. Insulation resistance:	MΩ				
9. Voltage at distribution board with no load for each phase to neutral:	V	230			
10. Voltage at distribution board with load (as calculated for full load) for each phase to neutral:	V	230			
11. Record value of operation of earth leakage units: (record tripping current)	mA				
12. Operation of earth leakage test button: (see annex)	Correct				
13. Polarity of points of consumption: (check every socket for correct polarity)	Correct		N/A		
14. Phase rotation is consistent at points all of consumption for three-phase systems:	Correct		X N/A		
15. All switching devices, make-and-break circuits: (observe test)	Correct				

Other comments pertaining to this project test report:

SECTION 5 - RESPONSIBILITY, INSPECTION AND TESTS When relevant, include other responsible parties & signatures in an annex page or take full responsibility # of annex pages

I, being the person responsible for the INSPECTION AND TESTING of the electrical installation, particulars of which are described in section 3 of this form, CERTIFY that the inspection and testing were done in accordance with this part of SANS 10142, that the results obtained and reflected on this report and annex pages are correct and indicate the extent of the liability of the signatory is limited to the installation described in Section 3 of this form.

Full name of registered person: **JACOB PETRUS BENADE** ID number: **640516 5014 050**

Signature:  Date: **17-01-23** Tel No: **0616194742** Email: _____

Registration certificate No.: **IE 17570** Date of registration: **10-07-97** Electrical Tester for Single Phase (ETSP): Installation Electrician (IE): Master Installation Electrician (MIE):

Vonk Claassens

Annexure 1
DEPARTMENT OF LABOUR
OCCUPATIONAL HEALTH AND SAFETY ACT, 1993
CERTIFICATE OF COMPLIANCE



Certificate of compliance in accordance with regulation 7(1) of the Electrical Installation Regulations, 2009.	CERTIFICATE NO.	Certificate type (tick appropriate block)	
	ECB 2066970	Initial Certificate <input type="checkbox"/>	Supplementary Certificate <input type="checkbox"/>

Supplement No.: _____ to Initial Certificate No.: _____ as issued on: _____

Identification of the relevant electrical installation
(Address or other unique reference, where applicable)

Physical address: 17 MOSSEC ST.

Name of building: _____ GPS Co-ordinates: _____

Suburb / Township: _____ Pole number: _____

District / Town / City: KLEINBRAK Erf / Lot No: _____

Declaration by registered person

I, J.P. BENADE (ID No 6405165014080)

a registered person declare that I have personally carried out the inspection and testing of the electrical installation described in the attached test report as per the requirements of:

a) electrical installation regulations 9(2) (a); (new electrical installation); or

b) electrical installation regulations 9(2) (b); (existing electrical installation); or (Tick appropriate box)

c) electrical installation regulations 9(2) (c); (new part to existing installation)

and deem the installation to be reasonably safe when properly used.

I have entered the number of this certificate on the attached test report(s).

I declare that the persons responsible for the design, specification, procurement, construction commissioning and inspection and test have completed the relevant sections of the test report.

Registered person registration number: IE 17570 Date of registration: 10.07.97

Type of registration: (Tick appropriate box)

Tester for Single Phase Installation Electrician Master Installation Electrician

Signature: _____ Date: 17.01.23

Contact details of registered person:

Address: 33 MEEL & DAL

Tel. No.: _____ Fax No.: _____

Cell No.: 061 619 4742 Email: jaapbenade@gmail.com

NOTE: 1. This certificate is not valid unless all the sections have been completed correctly and the test report in the format approved by the chief inspector is attached.

2. This certificate will be invalid if any corrections have been made.

Declaration by electrical contractor

I, J.P. BENADE (ID No 6405165014080)

declare that the electrical installation has been carried out in accordance with the requirements of the Occupational Health and Safety Act, 1993, and regulations made thereunder.

Electrical contractor registration number: WC 03346 Date of registration: 07.08.20

Signature: _____ Date: 17.01.23

Contact details of electrical contractor: Name: COMBO WORKS

Address: 33 MEEL & DAL

Tel. No.: _____ Fax No.: _____

Cell No.: 061 619 4742 Email: _____

Recipient Name: VONK CLAASSENS Signature: _____ Date: _____