



SOUTH AFRICAN LOCAL
GOVERNMENT ASSOCIATION

SALGA

Inspiring service delivery



Status of Small Scale Embedded
Generation **(SSEG)** In South
African Municipalities
October 2018



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Background

What is SSEG: Small Scale Embedded Generation (SSEG) refers to power generation facilities, located at residential, commercial or industrial sites, where electricity is generally also consumed. These are mainly solar photovoltaic (PV) systems but include also other technologies such as wind and biogas. An SSEG customer generates electricity on the customer's side of the municipal electricity meter, where the generation equipment is connected to, and synchronised with, the municipal electricity grid (i.e. 'embedded'). In recent years there has been an increasing interest in SSEG. This is due to increasing price of grid-electricity on the one hand and decreases in SSEG system prices on the other hand.

Update in Regulation: Schedule 2 of the Electricity Regulation Act was officially amended in November 2017 and now exempts certain power generation facilities less than 1 MW in size to have a generation license. If an installation meets the

criteria as stipulated in the amended schedule, the installation can be registered with NERSA instead of requiring a license. The generator must enter into a user-of-system agreement with the holder of the relevant distribution license for the exemption to apply. NERSA is currently working on regulatory rules to ensure efficient registration of these installations. SALGA expects that the distribution operators, i.e. municipalities or Eskom, would be in charge of registering the installations and report to NERSA. To consult the amendment please visit <https://archive.opengazettes.org.za/archive/ZA/2017/government-gazette-ZA-vol-629-no-41237-dated-2017-11-10.pdf> (from page 19)

Embedded Generation in Draft IRP 2018*: An allocation of 200 MW per year of embedded generation systems, from 1 MW to 10 MW in size, has been included in the Draft Integrated Resource Plan 2018. Generation licenses will



be needed. Should this system be connected to the national grid, the generator must enter into a use-of-system agreement with the holder of the distribution or transmission license holder. Requirements for these systems can be found at <http://www.energy.gov.za/IRP/irp-update-draft-report2018/IRP-Update-2018-Draft-for-Comments.pdf>. (see Appendix E)

* These details may change once the IRP 2018 is gazetted

National Overview

Figure 1 represents the best level of information obtained by SALGA on the uptake of SSEG processes and tariffs in municipalities by October 2018. The sector is rapidly evolving and this information may easily become out-dated. A survey was used and the information gathered from feedback by municipalities. Figure 1 shows the upward trend of municipalities adopting SSEG processes.

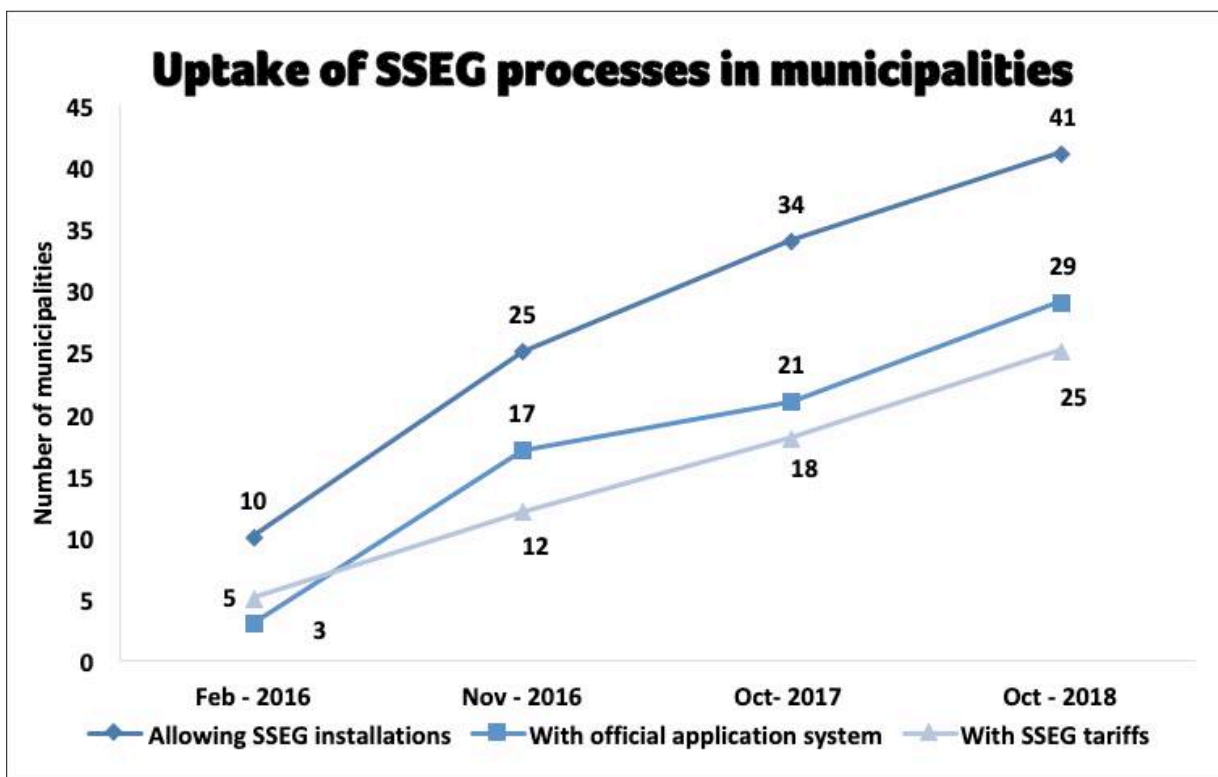


Figure 1: Trend in uptake of SSEG processes in municipalities



Provincial Overview

Table 1 gives a provincial breakdown of municipalities which:

1. allow SSEG installations on their electricity grids,
2. have established application processes for customers to apply and get authorisation to connect their systems to their electricity grid and,
3. have NERSA-approved SSEG tariffs, allowing them to compensate customers for excess electricity fed back onto their electricity grid

Table 1: Provincial breakdown of SSEG uptake

Province	Number of municipal electricity distributor in the province	Number of municipalities allowing SSEG installations	Number of municipalities with official application system	Number of municipalities with SSEG tariffs
Eastern Cape	22	4	3	2
Free State	17	1	1	2
Gauteng	9	4	3	2
KZN	25	1	1	1
Limpopo	16	3	1	1
Mpumalanga	14	2	1	0
Northern Cape	24	3	1	0
North West	13	1	1	0
Western Cape	25	22	17	17
TOTAL	165	41	29	25
Percentages of licensees		25%	18%	15%
Under development			9	6





* The number of municipal electricity distributors in each province is an estimate by SALGA based on the 165 distribution licenses issued to municipalities by NERSA and the municipal mergers which have occurred over time.

Table 2 gives a more detailed overview of the municipalities that allow SSEG installations within their municipalities, either on a case by case basis or through an application process.

Table 2: List of Municipalities allowing SSEG to connect to the grid

Province	Municipality	Province	Municipality
Eastern Cape	Buffalo City Metropolitan Municipality	Western Cape	Beaufort West Local Municipality
	Kouga Local Municipality		Bergrivier Municipality
	Nelson Mandela Bay Municipality		Breede Valley Local Municipality
	Makana Local Municipality		Cape Agulhas Local Municipality
Free State	Mangaung Metropolitan Municipality		City of Cape Town
Gauteng	City of Johannesburg		Cederberg Municipality
	City of Tshwane		Drakenstein Municipality
	Ekurhuleni Metropolitan Municipality		George Local Municipality
	Midvaal Local Municipality		Hessequa Local Municipality
KwaZulu-Natal	Ethekwini Municipality		Kannaland Municipality
Limpopo	Ephraim Mogale Local Municipality		Knysna Municipality
	Polokwane Municipality		Laingsburg Municipality
	Mogalakwena Local Municipality		Langeberg Municipality
Mpumalanga	Govan Mbeki Municipality		Mossel Bay Municipality
	Steve Tshwete Local Municipality		Oudtshoorn Municipality
Northern Cape	Dawid Kruiper Municipality		Overstrand Municipality
	Gamagara Local Municipality		Prince Albert Local Municipality
	Sol Plaatje Municipality		Saldanha Bay Municipality
North West	City of Matlosana		Stellenbosch Municipality
			Swartland Municipality
			Theewaterskloof Local Municipality
			Witzenburg Municipality

All SSEG customers must enter into a use-of-systems agreement with the distribution license holder, which is either the municipality or Eskom.



Contact Your Municipality

Some municipalities have published information online regarding their SSEG processes and requirements, or have email addresses which can be contacted for more information. Other municipalities listed in Table 2 don't yet have information online. In this case, the municipal electricity department can be contacted.

- Nelson Mandela Bay: <http://www.nelsonmandelabay.gov.za/Residents.aspx?pageID=291>
- Johannesburg: distributedgeneration@citypower.co.za
- Tshwane: SSEG@tshwane.gov.za
- Ethekewini: <http://pv.shisasolar.org.za/>
- Polokwane: <https://www.polokwane.gov.za/City-Documents/Shared%20Documents/COP%20Forms/Registration%20for%20Small-Scale%20Embedded%20Generation%20Form%202017.PDF>
- Sol Plaatjie : <http://www.solplaatje.org.za/residents/Pages/faq.aspx#ew2>
- City of Matlosana : www.matlosana.gov.za
- Cape Town: <https://savagelectricity.org.za/pv-renewables/>
- Hessequa: info@hessequa.gov.za
- Overstrand: <http://www.overstrand.gov.za/en/documents/electricity>

If you feel the information regarding a particular municipality is incorrect or if you would like to provide additional information, please contact SALGA using the contact details given at the end of this document.





Support Available to Municipalities

Embedded generator installations provide opportunities and risks for municipalities and need to be managed properly. The objective of SALGA is to facilitate the adoption of small scale embedded generation in a way that preserves the financial and technical integrity of municipal distribution systems.

With this in mind, the AMEU SALGA SSEG Resource Pack provides templates for municipalities to establish sound SSEG permitting procedures. More documents are under development and will be added to the pack which currently contains 5 documents:

1. Technical requirements for Small Scale Embedded Generation: http://www.cityenergy.org.za/uploads/resource_410.pdf
2. Application Form: http://www.cityenergy.org.za/uploads/resource_412.pdf
3. Commissioning Report: http://www.cityenergy.org.za/uploads/resource_415.pdf
4. Customer Service Contract: http://www.cityenergy.org.za/uploads/resource_413.pdf
5. Decommissioning Report: <http://www.cityenergy.org.za/getfile.php?id=411&category=5>

A tariff model tool has been developed to (1) measure the financial impact of proposed SSEG tariffs on municipal finances; and (2) evaluate the business case for customers who have installed solar PV systems based on the proposed SSEG tariffs. The model is available on <http://www.cityenergy.org.za/getfile.php?id=437&category=5>, together with a training presentation (http://www.cityenergy.org.za/uploads/resource_438.pdf and users' guideline http://www.cityenergy.org.za/uploads/resource_436.pdf).

Additionally PV Green Card (www.pvgreencard.co.za) has been developed by SAPVIA, the South African PV Industry Association to promote safe and high-quality installations.

SALGA, with support from other partners, are actively assisting municipalities in developing SSEG systems and processes. Should any municipality need support, please contact SALGA using the following details:

Ryan Roberts: rroberts@salga.org.za or 012 369 8000

Nhlanhla Ngidi: nngidi@salga.org.za or 012 369 8000

Contact Details:

Telephone:

(012) 369 8000

Fax:

(012) 369 8001

Physical Address:

Menlyn Corporate Park, Block B
175 Corobay Avenue
Cnr Garsfontein and Corobay
Waterkloof Glen ext 11
Pretoria

www.salga.org.za

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