



# NAMIBIA

## OBJECTIVES

- RE to represent 70% of country's energy mix by 2030, reducing GHG emissions by 89% compared to 2010 [link](#)

## TOTAL PV INSTALLED

LARGE SCALE		178.7 MWp
C&I		28 MWp
MG		0 MWp
SHS & RESIDENTIAL		0 MWp

source [AFSIA](#) [IRENA](#)

## CURRENT TARIFF GRID ELECTRICITY

	RESIDENTIAL	COMMERCIAL	INDUSTRIAL
MIN.	\$0.096	\$0.079	\$0.075
MAX.	\$0.157	\$0.216	\$0.170

[source](#)

## ELECTRIFICATION RATE

- 51% of the population has access to electricity [link](#)

## POLICY / REGULATION

- VAT is applicable to all imports of solar energy products in Namibia. Imports of these products from other SACU member countries will be free of customs duties in terms of the SACU Agreement, but not free of import VAT. [link](#)

Net-metering in place since 2017 for residential and C&I installations below 500 kWp [link](#)

- no FiT

## NOTEWORTHY DEVELOPMENTS

- 4.5 GW PV + CSP initiative with Botswana launched [link](#)
- Groot Glass planning for 80 MW project in Tses [link](#)
- 2x40 MW tender by NamPower ongoing [link](#)



# NIGER

## OBJECTIVES

- RE to reach 57% of the electricity mix [link](#)
- Deployment of 100 MW of solar by 2021 [link](#)

## TOTAL PV INSTALLED

LARGE SCALE		7 MWp
C&I		0.1 MWp
MG		0.1 MWp
SHS & RESIDENTIAL		0 MWp

source [AFSIA](#) [IRENA](#)

## CURRENT TARIFF GRID ELECTRICITY

	RESIDENTIAL	COMMERCIAL	INDUSTRIAL
MIN.	\$0.130	data could not be verified	
MAX.	\$0.242		

[source](#)

## POLICY / REGULATION

- all RE components are exempt from import duties and VAT [link](#)

## ELECTRIFICATION RATE

- 26% of the population has access to electricity [link](#)
- target to electrify 60% of the population by 2027 [link](#)
- achieve 30% electrification rate in rural areas by 2030 [link](#)
- achieve universal electrification by 2035 [link](#)

## NOTEWORTHY DEVELOPMENTS

- 150 MW being developed by West African Power Pool [link](#)
- Sterling & Wilson building 18.9 MW + 11.5 MWh Agadez hybrid [link](#)

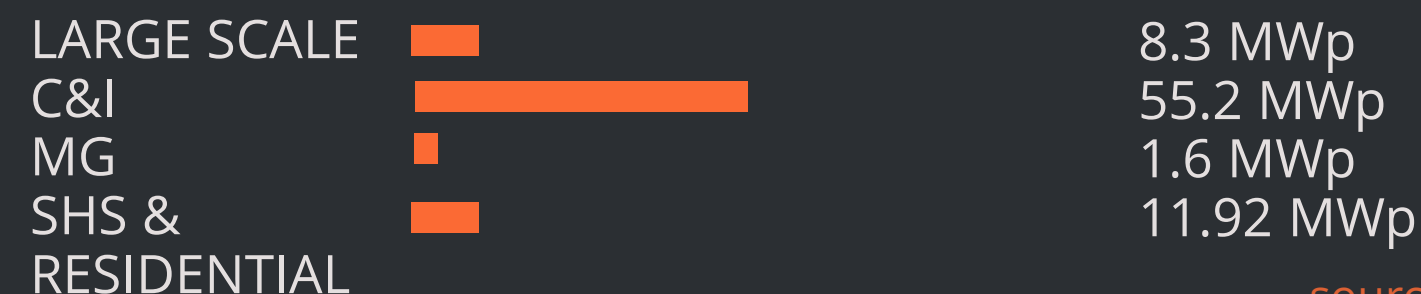


# NIGERIA

## OBJECTIVES

- RE to represent 23% of generation by 2025 and 36% by 2030 [link](#)
- this means RE would represent 10% of consumption by 2025 [link](#)
  - 500 MW of PV by 2025 [link](#)

## TOTAL PV INSTALLED



source [AFSIA](#) [IRENA](#)

## CURRENT TARIFF GRID ELECTRICITY

	RESIDENTIAL	COMMERCIAL	INDUSTRIAL
MIN.	\$0.065	\$0.100	\$0.148
MAX.	\$0.128	\$0.140	\$0.148

[source](#)

## ELECTRIFICATION RATE

- 84% of the urban population and 41% of the rural population has access to electricity for a national average at 60% [link](#)
- target to increase electricity access to 75% (urban= 90%, and rural= 60%) by 2020 and to 90% by 2030 [link](#)

## POLICY / REGULATION

- 5% import duty and 5% VAT on PV components [link](#)
- Solar Nigeria Programme (NSP) supporting the market for off-grid solar [link](#)
- \$350M program to support mini-grid and SHS development [link](#)
- FiT for projects up to 5 MW [link](#)
- Net-metering for projects below 1MW [link](#)

## NOTEWORTHY DEVELOPMENTS

- Katsina State looking to generate 600 MW [link](#)
- GVE building 72 MG financed by REPP [link](#)
- 400 MG being developed or built through different programs





# REPUBLIC OF THE CONGO

## OBJECTIVES

- Congo Energy Strategy 2015-2025 aimed at developing a PV electrification plan for remote villages [link](#)

## TOTAL PV INSTALLED

LARGE SCALE	0 MWp
C&I	0 MWp
MG	0 MWp
SHS & RESIDENTIAL	0 MWp

source [AFSIA](#) [IRENA](#)

## CURRENT TARIFF GRID ELECTRICITY

	RESIDENTIAL	COMMERCIAL	INDUSTRIAL
MIN.	\$0.070	\$0.070	\$0.057
MAX.	\$0.110	\$0.110	\$0.064

[source](#)

## POLICY / REGULATION

- all RE components are subject to import duties and VAT [link](#)
- country has no implemented legislation intended to incentivize the development of renewable energy projects [link](#)

## ELECTRIFICATION RATE

- 17% of the population has access to electricity [link](#)

## NOTEWORTHY DEVELOPMENTS

- Local company Copasol working on 40 MW large scale project with US Ultra Green Corp [link](#)

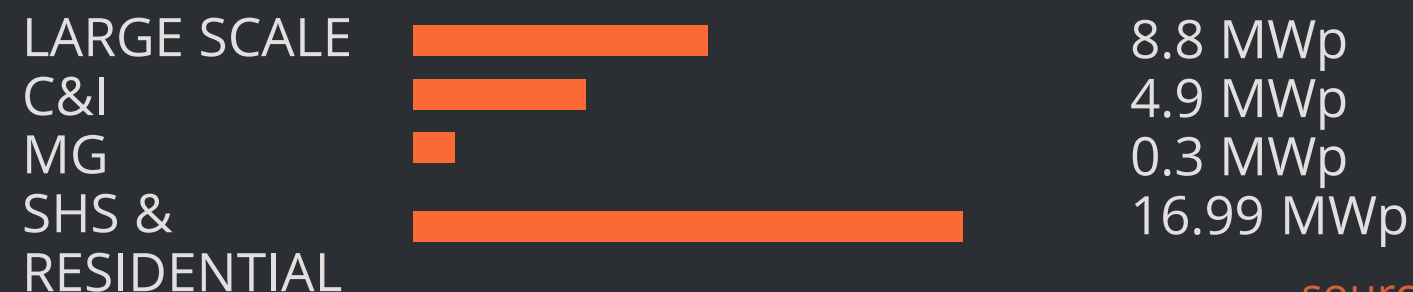


# RWANDA

## OBJECTIVES

- Rwanda eyes to reach 512MW of total installed capacity by 2024 [link](#)
  - no specific mention of the share of solar in this capacity

## TOTAL PV INSTALLED



source [AFSIA](#) [IRENA](#)

## CURRENT TARIFF GRID ELECTRICITY

	RESIDENTIAL	COMMERCIAL	INDUSTRIAL
MIN.	\$0.105	\$0.185	\$0.111
MAX.	\$0.294	\$0.301	\$0.178

[source](#)

## POLICY / REGULATION

- all PV components are exempted from VAT [link](#)
- \$15M subsidy + \$20M guarantee program for SHS launched in 2020 [link](#)
- no permit required for systems <50kWp
- no net-metering and no FiT

## ELECTRIFICATION RATE

- 56.7% of the population has access to electricity [link](#)
- 41.3% are connected to the grid and 15.4% have access through off-grid systems (mainly solar) [link](#)
  - target to reach 100% electrification by 2024 [link](#).

## NOTEWORTHY DEVELOPMENTS

- CrossBoundary planning 1 MW at Heineken brewery [link](#)
- ARC Power planning to facilitate 20,000 connections through solar business parks [link](#)



# SAO TOME & PRINCIPE

## OBJECTIVES

- increase RE in national energy mix to 47% by 2030 [link](#)

## TOTAL PV INSTALLED

LARGE SCALE	0 MWp
C&I	0 MWp
MG	0 MWp
SHS & RESIDENTIAL	0 MWp

source [AFSIA](#) [IRENA](#)

## CURRENT TARIFF GRID ELECTRICITY

RESIDENTIAL      COMMERCIAL      INDUSTRIAL

MIN.

data could not be verified

MAX.

## POLICY / REGULATION

- solar equipment subject to regular import duties and VAT
- no net-metering, no FIT

## ELECTRIFICATION RATE

- 71% of the population has access to electricity [link](#)

## NOTEWORTHY DEVELOPMENTS

- CISAN developing a hybrid 15 MWp / 2 MWh project on Sao Tome island [link](#)
- EDP Renewables planning 4.75 MWp / 3.5 MWh project on Principe island [link](#)
- 34 MW additional total capacity being developed by various companies



# SENEGAL

## OBJECTIVES

- 30% RE contribution in energy mix by 2025 [link](#)
- 100% solar mini-grids in 1,000 villages in Senegal by 2025 [link](#)

## TOTAL PV INSTALLED



source [AFSIA](#) [IRENA](#)

## CURRENT TARIFF GRID ELECTRICITY

	RESIDENTIAL	COMMERCIAL	INDUSTRIAL
MIN.	\$0.173	\$0.271	\$0.112
MAX.	\$0.254	\$0.346	\$0.370

[source](#)

## POLICY / REGULATION

- all RE components are exempted from VAT [link](#)
- hybrid form of net-metering and FiT introduced in 2018 [link](#)

## ELECTRIFICATION RATE

- 69% of the population has access to electricity [link](#)
- objective of 100% electricity coverage by 2025 [link](#)
- connection of at least 90% of rural households by 2025

## NOTEWORTHY DEVELOPMENTS

- 102 MW under construction [link](#)
- tender launched for 133 MG [link](#)





# SEYCHELLES

## OBJECTIVES

- 5% RE in the energy mix by 2020 and 15% by 2030 [link](#)

## TOTAL PV INSTALLED



source [AFSIA](#) [IRENA](#)

## CURRENT TARIFF GRID ELECTRICITY

	RESIDENTIAL	COMMERCIAL	INDUSTRIAL
MIN.	\$0.060	\$0.162	\$0.162
MAX.	\$0.200	\$0.206	\$0.206

[source](#)

## POLICY / REGULATION

- all RE components are exempted from Goods and Service tax [link](#)
- SEEREP provides loan facility open to households to acquire solar systems [link](#)
- rebate scheme residential and small commercial installations [link](#)
- net-metering for residential and commercial users since 2013 [link](#)

## ELECTRIFICATION RATE

- 100% of the urban areas but less than 20% of rural areas are connected to the grid [link](#)

## NOTEWORTHY DEVELOPMENTS

- construction of 5.8 MW floating solar project on hold due to COVID [link](#)
- 5 MW / 3.3 MWh Romainville MG under construction [link](#)



# SEGMENT REVIEW: MG





## MG RECEIVE A BOOST AFTER CHALLENGING 2020

Out of a population of 1.3B, the African continent still counts an estimated 600M of people who do not have access to electricity. Efforts are being done in most countries to solve this issue and 3 solutions are possible: extending the traditional grid, providing stand-alone solar home systems (SHS), and building mini-grids (MG). These 3 options all have pros and cons but one thing is for sure: if Africa is to reach universal electrification, the solution will

inevitably need to be based on a mix of these 3 electrification solutions. And mini-grids are believed to be the cheapest electrification option for 100 million people in Africa.

In 2020, the COVID crisis affected MG developers and projects more than any other segment of the solar industry. Indeed, MG development requires more work in the field, more logistics, access to more remote areas, and direct contact with the population, all of which were made particularly difficult with COVID and the associated movement restrictions. As a result, many MG projects which were under development or going through a tender phase were slowed down or completely put on hold. It is fair to say that 2020 was not a great year for the mini-grid sector.