

PROJECTS PROFILE

HOME OF RENEWABLE ENERGY
& ELECTRICAL CONTRACTING

KENYA | UGANDA | TANZANIA





WELCOME TO KNIGHTS ENERGY

Our **Mission**

Guided by Innovation, we provide Quality, Reliable Clean Energy Solutions towards a Carbon Neutral Environment.

Our **Vision**

A Beacon in Provision of Quality and Sustainable Energy Services in Africa.

Our **Values**



INTEGRITY

Guided by strong moral principles.



QUALITY

Excellence in the provision of distinct products and Services.



TEAM WORK

Working together to achieve clients' satisfaction.



SAFETY

Adherence to all safety standards in our daily activities.



INNOVATION

Researching & implementing creative products & services.



PASSION

Self-driven, committed, disciplined, highly energized team



**Home of Renewable Energy
& Electrical Contracting**

ABOUT KNIGHTS ENERGY

Knights Energy is a Renewable Energy Company specializing in Low Carbon Technologies with a special emphasis on Solar and Wind Energy in Africa. The Company has the capacity to realise projects of variable complexity and provide the expertise to fully supply and install simple to complex on-grid and off-grid Photovoltaic power plants with verifiable experience in the task at hand.

Over the years, the Company has become one of the biggest installers and maintenance partners for medium and large scale solar installations in the region with a considerable number of solutions for Domestic, Institutional, Commercial and Industrial projects.

Knights Energy has developed an integrated Quality, Health, Safety, Security and Environment Policy statement to confirm the top management's commitment to Health & Safety.

The Company is also fully equipped with the industry standard equipment for Professional solar plant installation safe and quality installation, Testing and certification as well as full-fledged Operation and maintenance team.



Why us for your solar solutions?

At Knights Energy, we provide solar solutions for industrial, commercial, and residential applications, that enable individuals and organizations to be part of a sustainable green energy powered world.

We work to provide options that meet the specific customer needs and are consistent with ensuring Environmental Sustainability.



WHAT WE DO

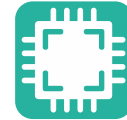
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Solar Water Heating

One of the easiest ways that you can incorporate the principles of green living into your everyday life is by installing a Solar Hot Water Heater at your home. Hot water accounts for a big percentage of the energy consumption in the typical home.

These heaters are a very effective method of using natural energy to save you money on your energy bills. There are hundreds of designs available to fit any budget.



Powerline Construction

Having undertaken the indicated works for Rural Electrification Authority (REA) now Rural Electrification & Renewable Energy Corporation (REREC), Knights Energy stands well in the experience of electricity generation and transmission.

As such, construction of both Low and High Voltage Transmission lines are works well within our capability, as we boast of competent and experienced staff accompanied by the requisite tools and equipment.



Solar Water Pumping System

Our Solar Water Pumping System/Waterbox is specially designed for water supply and irrigation especially in remote areas where no reliable electricity supply is available

It is a complete "Plug & Play" solution for the simplest installation of a solar borehole pumping system: the smart solution to enable any user to create a solar water pumping system anywhere this may be required. The System can extract water from a borehole, lake, and river. It is based on a photovoltaic solar system for the extraction of water.



Eco Smart Home System

Our Eco Smart Home System ensures that the solar power you produce is used in the best possible way and, as an option, stored. You can cover an especially large portion of your energy needs and gain greater independence, for example from rising energy costs.

Besides offering great financial benefits improved energy efficiency and greater independence from rising electricity rates, a Smart Home also provides homeowners with a completely transparent energy budget.



Containerized power solutions for off-grid applications

Worried about your electricity bills? Looking for ways to Save Energy costs? Looking to invest in an Energy System for your own Consumption? Look no further than Knights Energy!

There is a simple, reliable and low-cost solution for decentralized energy supply: PV-powered off-grid systems.

They can be used to build stable, decentralized power distribution grids in remote locations not connected to the public power grid/want to be energy independent.



Electric Vehicles Charging

Our current transport sector has to break away from energy- and carbon-intensive development paths that have resulted in higher energy costs, higher Carbon emissions, air pollution, poor public health and a range of other negative impacts.

Changing transport infrastructure can be expensive, we all want better transport and lower costs that come from better efficiency.

REFERENCE PROJECTS

Our Reference Projects are testament to our success in delivering world-class solar power plants to leading investors in the PV sector.





REA BALESIA

Commission date: 8/23/2018

PLANT DETAILS

- ⚡ Plant Size: 68.47 KWp
- 📍 Location: Nairobi

TECHNICAL SPECIFICATIONS

- PV inverter: 4x Sunny TriPower STP 15000TL-30 x4
- PV modules: 174x Jinko JKM 330PP-72
34x Jinko JKM 325PP-72
- Battery Inverter: 4x Sunny Island SI 8.0 H
- Nominal Battery Capacity: 3636 Ah
- Communication: Sunny Home manager 2.0
SMA cluster controller



TWO RIVERS MALL

Commission date: 9/18/2018

PLANT DETAILS

Plant Size: 1,037.92 KWp

📍 Location: Nairobi

TECHNICAL SPECIFICATIONS

PV inverter: 19x Sunny TriPower STP 20000TL-30

22x Sunny TriPower STP 25000TL-30

Communication: 1



BUTLER MISSION HOSPITAL

PLANT DETAILS

- ⚡ Plant Size: 11kWp PV
- 📍 Location: Mombasa

TECHNICAL SPECIFICATIONS

- PV inverter: 2 x Sunny Boy 4000TL
(Total parallel Max Output of 8kW)
- Battery Inverter: SMA Sunny Island 8.0H 9pcs
- Modules Type: 325W 277pcs
- Battery Bank: 3 Sets BAE 10 PVV 1500





DREAM PROJECT

PLANT DETAILS

- ⚡ Plant Size: 50kw Hybrid Solar Power Plant
- 📍 Location: Karen, Nairobi

TECHNICAL SPECIFICATIONS

- PV inverter: 2 x SMA STP 25000TL-30
- Battery Inverter: SMA Sunny Island 8.0H 9pcs
- Battery Type: 24 x BAE Secura Solar Batteries- OPZs

- Intelligent Control: Multicluster system 6.3
- Monitoring: SMA Cluster controller
- Metering: SMA energy meter

MISSIONARY BENEDICTINE SISTERS, KAREN

Commission date: 2016

The rising electricity costs, fuel costs arising from generator backup, frequent outages, and maintenance costs were some of the major challenges the institution faced.

Knights Energy proposed several measures to reduce the energy consumption rates and came up with a lean combined (total) energy footprint that was powered by the proposed Photovoltaic.

The 100 kWp solar array and 514kWh (10,700AH) battery bank with the SMA Multicluster System with Sunny Island runs the entire center during the day and night.



PLANT DETAILS

Plant Size: 100 kWp

Location: Karen, Nairobi Priory

PLANT INFORMATION

Annual Energy yield: 156,798 kWh

Estimated Reduction in CO₂: About 127 Tons

SMA System Technology

9 Sunny Island 8.0H-11

4 Sunny Tripower 25000TL-30

1 Multicluster Box 12.3-20



REA SARIF

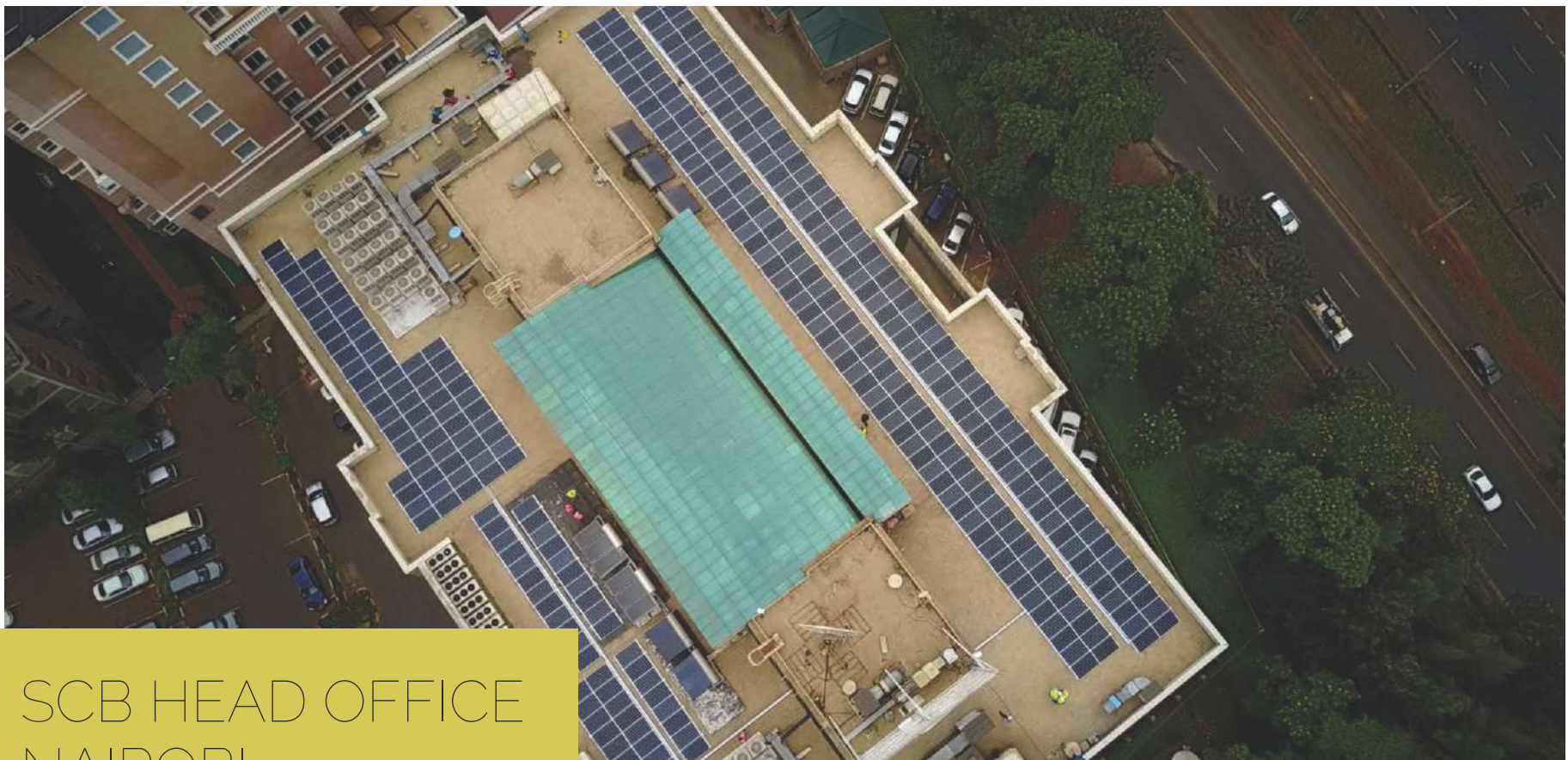
Commission date: 6/2/2018

PLANT DETAILS

- ⚡ Plant Size: 64.48KWp
- 📍 Location: Garissa

TECHNICAL SPECIFICATIONS

- PV inverter: 4x Sunny TriPower STP 15000TL-30 x4
- PV modules: Jinko JKM 325PP-72
Jinko JKM 265 PP-72
- Battery Inverter: 4x Sunny Island SI 8.0 H
- Nominal Battery Capacity: 2566 Ah
- Communication: Sunny Home manager 2.0
SMA cluster controller



SCB HEAD OFFICE NAIROBI

Commission date: 9/5/2017

PLANT DETAILS

Plant Size: 103.00 KWp

Location: Nairobi

TECHNICAL SPECIFICATIONS

PV inverter: 4x Sunny TriPower STP 25000TL-30

PV modules:

Communication: Sunny Home manager 2.0





REA LOWARENGAK

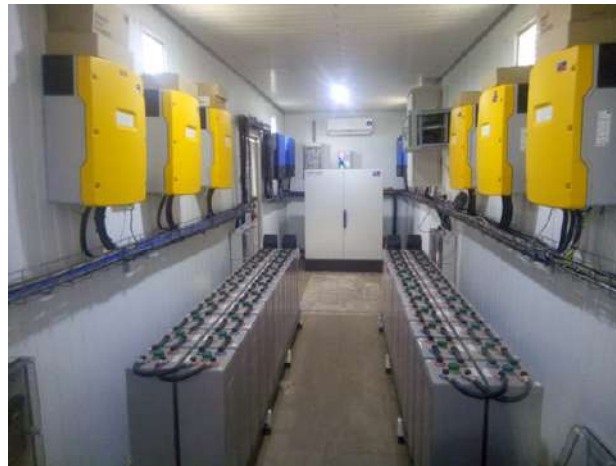
Commission date: 4/26/2018

PLANT DETAILS

- ⚡ Plant Size: 69.44 KWp
- 📍 Location: Nairobi

TECHNICAL SPECIFICATIONS

- PV inverter: 4x Sunny TriPower STP 15000TL-30 x4
- PV modules: Jinko JKM 330PP-72
Jinko JKM 325 PP-72
- Battery Inverter: 4x Sunny Island SI 8.0 H
- Nominal Battery Capacity: 3636 Ah
- Communication: Sunny Home manager 2.0
SMA cluster controller



PRECIOUS BLOOD SECONDARY SCHOOL

Commission date: 7/23/2019

PLANT DETAILS

⚡ Plant Size: 30.82 KWp

📍 Location: Juja Farm



TECHNICAL SPECIFICATIONS

PV inverter: Sunny TriPower STP 15000TL-30

Battery Inverter: 2x Sunny Island SI 8.0 H

Nominal Battery Capacity: 1940 Ah

Communication: Sunny Home Manager 2.0

SMA Cluster Controller





SKILLS CENTRE MALAA

Commission date: 7/6/2019

PLANT DETAILS

Plant Size: 12.6KWp

Location: Nairobi

TECHNICAL SPECIFICATIONS

PV inverter: 4x Sunny Boy SB 4.0TL-21

PV modules:

Battery Inverter: Sunny Island SI 8.0 H

Nominal Battery Capacity: 400 Ah

Communication: Sunny Home Manager 2.0

REA ILLUAT

Commission date: 8/28/2018

PLANT DETAILS

- ⚡ Plant Size: 67.60 KWp
- 📍 Location: Nairobi

TECHNICAL SPECIFICATIONS

- PV inverter: 4x Sunny TriPower STP 15000TL-30 x4
- PV modules: 174x Jinko JKM 330PP-72
34x Jinko JKM 325 PP-72
- Battery Inverter: 4x Sunny Island SI 8.0 H
- Nominal Battery Capacity: 3608 Ah
- Communication: Sunny Home Manager 2.0
SMA Cluster Controller





ST. LAZARE DEPAUL

Commission date: 11/14/2019

PLANT DETAILS

- ⚡ Plant Size: 12.6 KWp
- 📍 Location: Nairobi

TECHNICAL SPECIFICATIONS

- PV inverter: 3x Sunny Boy SB 4.0 1A40
- PV modules:
- Communication: 1 Sunny Home Manager 2.0



CHAGARIGA CLINIC

Commission date: 11/6/2018

PLANT DETAILS

- ⚡ Plant Size: 5.3KWp
- 📍 Location: Meru

TECHNICAL SPECIFICATIONS

- PV inverter: Sunny Boy SB 5.0- 1AV-4-
- Battery Inverter: Sunny Island SI 4.4 H
- Nominal Battery Capacity: 19200 Ah
- Communication: Sunny Home Manager 2.0



TOTAL
COMMITTED TO BETTER

SERVICE STATION SOLARIZATION PROJECT

Total launched a program to equip 5,000 of its service stations worldwide with solar panels within five years, including 145 in Kenya.

The total solar capacity to be installed worldwide is about 200 MW, equivalent to the amount of electricity used to power a city of 200,000 people.

“The project is fully aligned with Total’s ambition of becoming the responsible energy major and its commitment to developing solar power. It will reduce our carbon emissions by 100,000 tons per year and cut our electricity bill by \$40 million per year.”

In Kenya 25 stations were installed with solar panels in the pilot phase; 10 under the first phase and 15 under the second Phase. A further 120 stations are currently under construction in a 3 year plan.





MOMBASA ROAD

PHASE 1

The cased area is the Total Service Station located in Imara Daima. It serves motorists traveling along Mombasa road.

PLANT DETAILS

- ⚡ Plant Size: 22.56 KWp
- 📍 Location: Nairobi

TECHNICAL SPECIFICATIONS

- PV inverter: SMA Sunny Tripower 20000TL
- Number of PV modules: 69 pcs



Total's Golden Rules





THIKA ROAD

PHASE 1

The cased area is Total Thika Road Service Station located in Thome- Kasarani constituency, Nairobi. It serves motorists travelling along Meru- Nairobi Highway (Thika Road).

PLANT DETAILS

- ⚡ Plant Size: 20.928 KWp
- 📍 Location: Nairobi

TECHNICAL SPECIFICATIONS

- PV inverter: SMA Sunny Tripower 20000TL
- Number of PV modules: 64 pcs

Total's Golden Rules





EASTERN BYPASS

PHASE 1

The cased area is Total Eastern Bypass Service Station located in Ruiru. It serves motorists travelling along the Eastern Bypass connecting Thika Road and Kangundo Road.

PLANT DETAILS

- ⚡ Plant Size: 12.42 KWp
- 📍 Location: Nairobi

TECHNICAL SPECIFICATIONS

- PV inverter: SMA Sunny Tripower 12000TL
- Number of PV modules: 38 pcs

Total's Golden Rules



SOUTH C

PHASE 1

The cased area is Total South C Service Station located in Lukenya, Machakos. It serves motorists travelling along Mombasa road.

PLANT DETAILS

- ⚡ Plant Size: 22.563 KWp
- 📍 Location: Nairobi

TECHNICAL SPECIFICATIONS

- PV inverter: SMA Sunny Tripower 20000TL
- Number of PV modules: 69 pcs

Total's Golden Rules





WAIYAKI WAY

PHASE 1

The cased area is Total Waiyaki way Service Station located in Spring valley, Nairobi. It serves motorists travelling along Waiyaki Way.

PLANT DETAILS

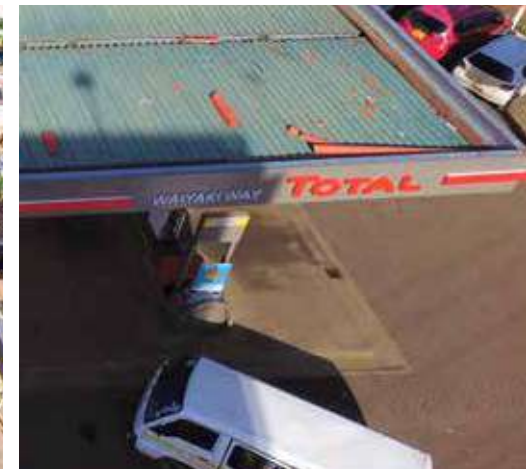
Plant Size: 18.966 KWp

📍 Location: Nairobi

TECHNICAL SPECIFICATIONS

PV inverter: SMA Sunny Tripower 20000TL

Number of PV modules: 58pcs





RABAI ROAD

PHASE 1

The cased area is Total Rabai Road Service Station located in Makadara. It serves motorists travelling along Jogoo road.

PLANT DETAILS

- ⚡ Plant Size: 18.966 KWp
- 📍 Location: Nairobi

TECHNICAL SPECIFICATIONS

- PV inverter: SMA Sunny Tripower 20000TL
- Number of PV modules: 58 pcs

Total's Golden Rules



WESTEND

PHASE 1

The cased area is Total Westend Service Station located in Biashara, Nakuru. It serves motorists travelling along George Morara road.

PLANT DETAILS

- ⚡ Plant Size: 17 KWp
- 📍 Location: Nakuru

TECHNICAL SPECIFICATIONS

- PV inverter: SMA Sunny Tripower 15000TL
- Number of PV modules: 52 pcs

Total's Golden Rules





GIGIRI

PHASE 2

Power plant commissioned on May 2019.
 Power plant is installed on the shop and service bay iron sheet roofs.
 2722.3kWh produced since commissioning to Oct 2019, offering 18% consumption offset on average.

PLANT DETAILS

- ⚡ Plant Size: 37.61 KWp
- 📍 Location: Nairobi

TECHNICAL SPECIFICATIONS

- PV inverter: SMA STP 15000-TL 30
SMA STP 20000-TL 30
- Number of PV modules: 115 pcs

Total's Golden Rules





MBAGATHI

PHASE 2

Site commissioned on Jan 2019. The power plant is installed on two roofs: The Carwash iron sheet and the shop Concrete flat roof. The SMA inverter on site is protected by a lockable cage. 1324.22kWh produced since commissioning to Oct, offering 24.2% consumption offset on average.

Total's Golden Rules



PLANT DETAILS

- ⚡ Plant Size: 13.08 KWp
- 📍 Location: Nairobi

TECHNICAL SPECIFICATIONS

- PV inverter: SMA STP 15000-TL 30
- Number of PV modules: 40 pcs



NAIVASHA

PHASE 2

Site commissioned on February 2019. Power plant installed on the shop Service Bay iron sheet roof. The SMA inverter and AC Switchgear are installed in the power room. 1519kWh produced since commissioning to Oct 2019, offering 34% consumption offset on average.

PLANT DETAILS

- ⚡ Plant Size: 14.715 KWp
- 📍 Location: Naivasha

TECHNICAL SPECIFICATIONS

- PV inverter: SMA STP 15000-TL 30
- Number of PV modules: 45 pcs

Total's Golden Rules





STATEHOUSE ROAD

PHASE 2

The cased area is Total Statehouse service station located in Kilimani, Nairobi. It serves motorists travelling along Dennis Pritt Road.

PLANT DETAILS

- ⚡ Plant Size: 20.55 KWp
- 📍 Location: Nairobi

TECHNICAL SPECIFICATIONS

- PV inverter: SMA STP 20000-TL 30
- Number of PV modules: 63 pcs

Total's Golden Rules



ABC PLACE

PHASE 2

Power plant commissioned on July 2019. Power plant is installed on the Mugg and Bean and the Canopy iron sheet roofs. The SMA inverter is protected by cage. 2755.54kWh produced since commissioning to Oct 2019, offering 50.25% consumption offset on average.

PLANT DETAILS

- ⚡ Plant Size: 35.96 KWp
- 📍 Location: Nairobi

TECHNICAL SPECIFICATIONS

- PV inverter: SMA STP 15000-TL 30
SMA STP 20000-TL 30
- Number of PV modules: 115 pcs



Total's Golden Rules





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