

# **Eco-smart** Home System

Powering Your Entire House & Electric Car



SAVE ENERGY & FUEL COST Knights Energy brings you the future NOW!

www.knightsenergy.co.ke

### Welcome to Knights Energy for Professional Solar Solutions

The Easy Affordable Way To Install Solar Systems In Your Home & Business

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. Knights Energy is all about professional solar solutions.

We are committed to providing alternative solutions of the highest standards and also address the energy cost factor. We have invested many resources and brainpower to achieve these goals. We aim at dispelling over-reliance on expensive and unreliable mainstream energy sources. We also strive to achieve PV use in daily domestic power generation.





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### Home of Renewable Energy & Electrical Contracting



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 fullfledged 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.

The firm serves its long-term objective of being a one-stop-solution provider for all your home, office and Industrial solutions.



KNIGHTS ENERGY for professional Solar Solutions



## What's an Eco-smart Home System

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# How does it work?

Solar power works by converting light from the sun into electricity. This electricity can then be used in your home or exported to the grid when it's not needed.

This is done by installing Solar Panels on your roof which generate DC (Direct Current) electricity. This is then fed into a solar inverter which converts the DC electricity from your solar panels into AC (Alternating Current) electricity.



With solar power, you don't need to switch it on in the morning or switch it off at night – the system will do this seamlessly and automatically. You don't need to switch between solar power and the grid – the system does this all automatically so you won't notice any change to how the appliances in your home function.

In fact a solar system requires very little maintenance (as there are no moving parts) which means you'll hardly know it's there. This also means a good quality solar power system will last a long time.

Your solar inverter (usually installed in your garage or in an accessible spot), can provide you with information like the amount of electricity being produced at any particular point in time or how much it has generated for the day or in total since it has been operating. Many quality inverters feature wired or wireless connectivity and sophisticated on-line monitoring and reporting.

If it seems complicated, don't worry; one of Iknights Energy Consultants will guide you through the process of how solar power works either by phone or email



# Eco-Smart Applications



### Heating Cooling & Ventilation Systems

- Heating Cooling and ventilation Systems
- Heating and cooling distribution for individual rooms
- Cooperation between heating and cooling systems
- Cooperation with a weather station
- Ventilation control based on room Co2 concentration



#### Charging EV

Owning an electric car that is charged by a solar power system is an excellent way to ensure your transportation is both cost-efficient and emissionsfree. As electric vehicles (EVs) continue to shift market share away from traditional internal combustion engines, the world will see an increased demand for the rapid and efficient charging of lithium-ion batteries.



#### Powering Your Entire House & Electric Car



Multimedia

TV
Radio
Music
Internet
Video games
Recording
HD Channels



#### Security

- Biometric locking systems, authentication and identification
- Movement sensors
- Video surveillance
- Alarm & Smoke detector, Panic alarm buttons
- Lights are automatically switched off when the security alarm system is activated



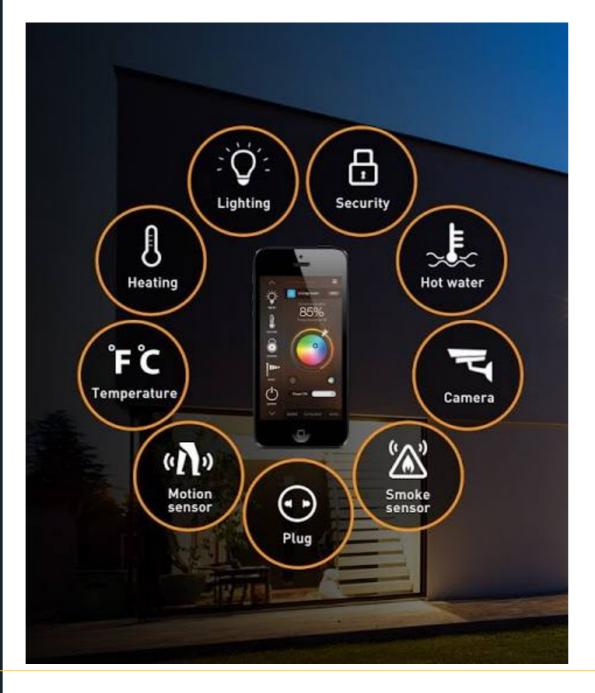
#### Outdoor

- Lawn watering
- Greenhouse watering
- Greenhouse ventilation
- Pool water filtration
- Pool water heating

# Why an Eco-smart Home System

- You become more independent from rising electricity prices
- You produce your own environmentally friendly and inexpensive solar power
- You have an overview of your household power consumption at all times and can see where you can save
- You don't have to sacrifice comfort or a reliable energy supply

- You benefit from automatic control features that take into account your individual needs
- You use a future-proof technology that is ready for varied electricity tariffs and the impending smart grid.
- This system uses intelligent planning and control including storage systems for optimal load distribution





This system uses intelligent planning and control including storage systems for optimal load distribution. It also visualizes the entire energy budget allowing owner-operators to have a detailed overview of their installation

# Get Your Eco-smart Home System



Our Eco Smart Home System ensures that the solar power you produce is used in the best possible way andas 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.

This transparency also facilitates the more conscientious use of energy and helps reduce total energy consumption.

# Our Process



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# How it Works for your Car

#### **Own an EV Today**

Over almost 100 years of the internal combustion engine, a new automotive engine has arrived, cleaner; quieter; and fun to drive. The electric car is here. And it's here to stay. But, after so many years of the same petrol or diesel cars and vans, it's understandable that you may have some questions about switching to electric. And that's where we come in.

At Drive Electric our aim is simple: to provide all the facts and information you're looking for to make an informed decision, and to show you why we're so passionate about motoring's electric future.

#### Solar for EV

Owning an electric car that is charged by a solar power system is an excellent way to ensure your transportation is both cost-efficient and emissions-free.

As electric vehicles (EVs) continue to shift market share away from traditional internal combustion engines, the world will see an increased demand for the rapid and efficient charging of lithium-ion batteries.

As the opportunity to seamlessly integrate the EV charging process with residential solar grows, Knights Energy promises to offer a more efficient, less expensive, and environmentally-friendly method of powering homes and cars.



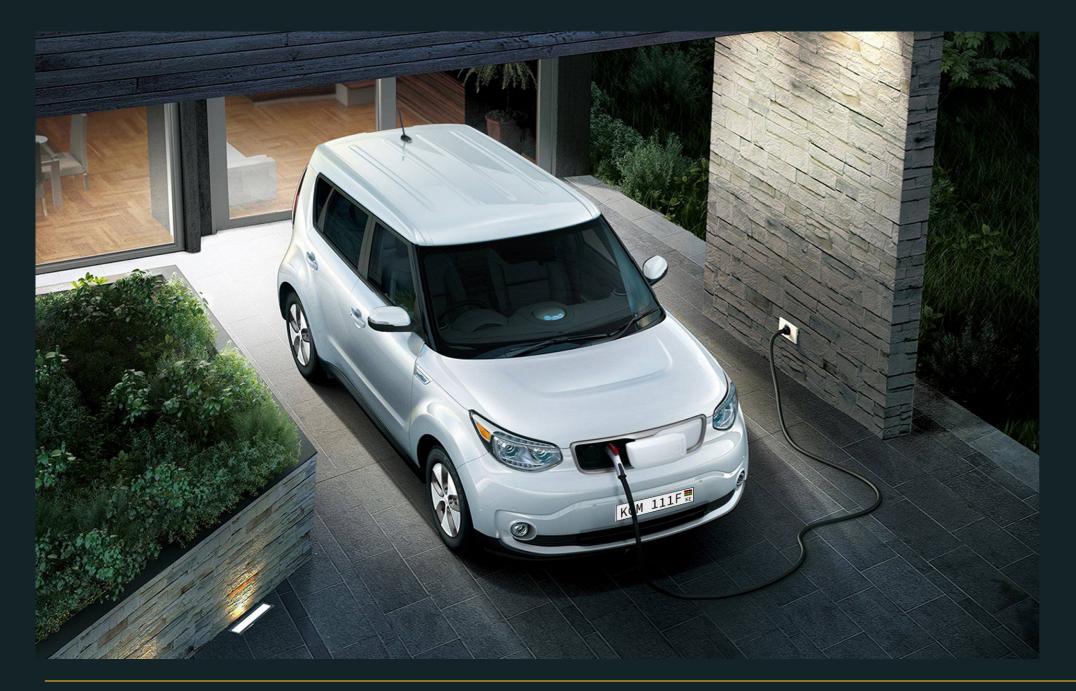


### So how do I drive an EV with solar power?

If you want to drive an electric vehicle, you're going to need an electric vehicle charging point at home, either mounted in the garage or on the driveway.

To charge your electric vehicle with solar, you need two components: a solar electric system and a Level II electric vehicle charging station. Knights Energy can install both for you. A wallmounted Level II charger can deliver about 25 miles of range per hour of charging, allowing you to wake up every morning to a fully charged vehicle. Level II charging is much faster than, and highly preferable to Level I plug-in outlet charging which typically delivers 4-5 miles per hour of charging.

A grid-tied solar electric system is the best way to put solar to work for your electric car. A grid-tied system will produce power whenever the sun is out, regardless of whether your house needs it that moment or not. So, if you are at work (and charging there!), the power generated at your home will be sold to the grid. You get that power back in the form of a credit, which you can use at night while re-charging your EV.







### Drive on Sunshine & Save Money

The return of the electric vehicle ushers in a new era of transportation, where we can finally sever ties to dirty, finite fossil fuels and get where we need to go with clean power from the sun.

Just 9 solar panels provide roughly enough electricity to power 12,000 miles of electric driving each year at a low, fixed cost. Level II charging stations can deliver full vehicle battery charge in 4 to 8 hours depending on battery size – so you'll wake up to full charge.

### Electric vehicles offer a unique trifecta of benefits:

**Lower carbon footprint:** Transportation is one of the largest contributors of greenhouse gases in Kenya.

**Save money:** EVs cost less to operate, and maintain. Power your car with solar and drive for the equivalent of \$.71/gallon<sup>1</sup>, while accelerating the payback on your solar array by 26%.

**Energy independence:** Get where you need to go with power from the sun, generated locally, and stop sending money to oil companies.



TURKANA COUNTY | BUNGOMA COUNTY | HOMABAY COUNTY | NAKURU COUNTY | MIGORIJCADIONCOUNTY | NAIROBI COUNTY | GARISSA COUNTY | MARSABIT COUNTY

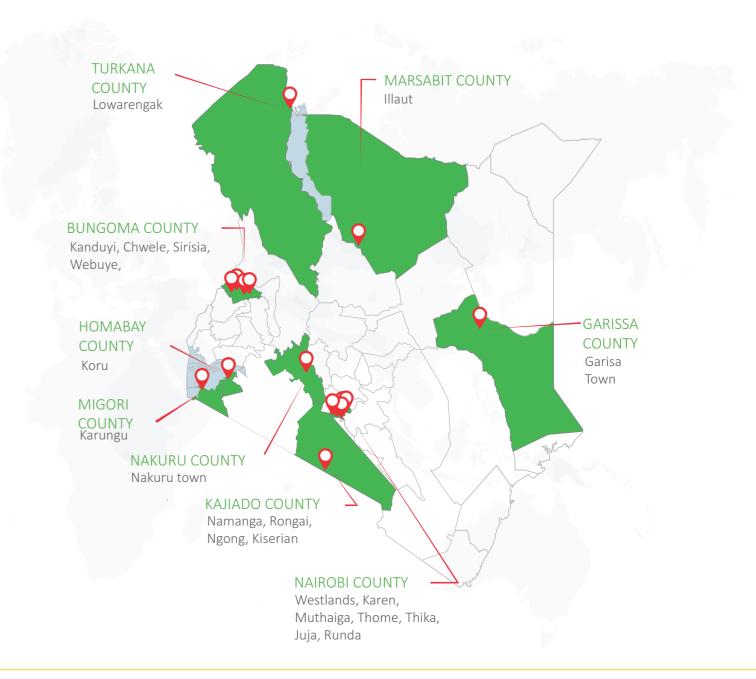
# Where We've Been

Our core values make us the best at what we do. We assist our clients in achieving their goals of cost stability, energy independence, and environmental stewardship.

With a top of the class team, we have built a long list of clients (both in the commercial and residential Sectors) who cover a wide geographical scope, in and out of the country; some of whom you can see on the map on the right.

On the section below, you will see the project details of our previous clients, as well as image results of what we achieved.





## **Eco-smart** Home System



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