



RONCHO ENERGY

Energy Solutions



ENERGY Solutions

Technology at Work



Standalone Solar Solutions

Solar Plug & Play Products

We offer affordable Solar Plug & Play products that tackle the most essential power needs for underserved communities.

Flagship products (Orb Energy)



Solelectric 10

Solar Lantern
✓ Charges
mobile phones



Solelectric 15

Small Home Lighting
✓ 2 LED Bulbs
included
✓ Charges mobile
phones



Solelectric 30

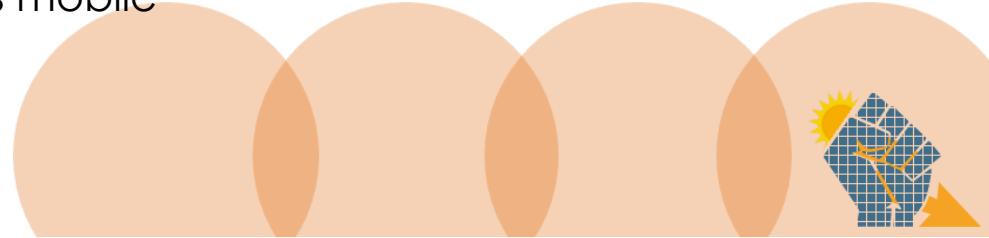
Small Home Lighting
✓ 4 LED Bulbs included
✓ Charges mobile phones



090 6992 0242



sales@ronchoenergy.com



Standalone Solar Solutions

Solar Plug & Play Products



Solelectric 120

Small Home Entertainment System

- ✓ 40W Solar Panel
- ✓ Power Console with in-built battery
- ✓ 4 LED Bulbs included
- ✓ 22" DC LED TV included
- ✓ Easy to install

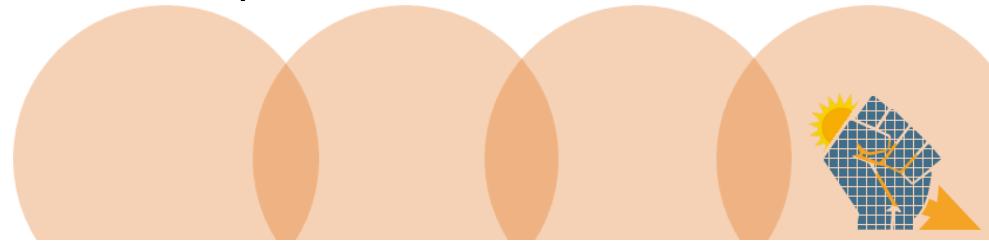
How to order (sales@ronchoenergy.com, 090 6992 0242):

We have distributors that make these plug and play products available anywhere in Nigeria. Contact us to connect you to the right channel.

yudala
...the largest online & offline retail chain
(Online)

Ibrahim Umar
(North East & South)

Brands Optimal
(West)



Standalone Solar Solutions

Component-Based Solar Solutions for your **home or office**

(SOLAR PANELS + INVERTER + ENERGY STORAGE)



Standalone Solar Solutions

Component-Based Solar Solutions for your **home or office**

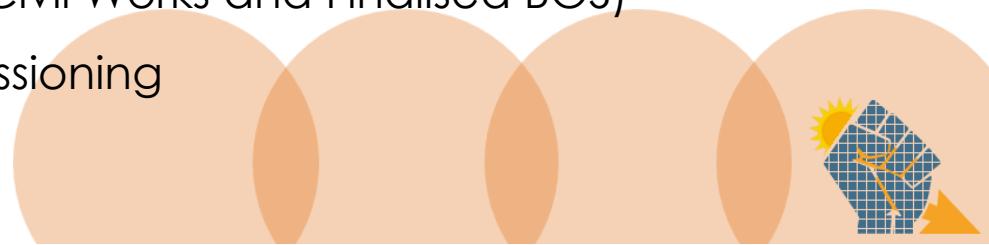
Solar Panels + Inverters + Energy Storage are best for clients that:

- ✓ receive little or no electricity;
- ✓ want to reduce or stop paying electricity bills;
- ✓ Want to reduce or stop spending money on fuel.

At Roncho Energy we consult with our clients using a 5-stage process that guarantees maximum value from your investment in a power solution.

5-stage Installation Process

- Capture Client Requirements
- Preliminary System Design (Establish main system components)
- Site Assessment
- Final Bill of Material (Logistics, Civil Works and Finalised BOS)
- Mobilisation, Installation & Commissioning



Standalone Solar Solutions

Component-Based Solar Solutions for your **home or office**

Supported Components / Products

Solar Panel



Inverters

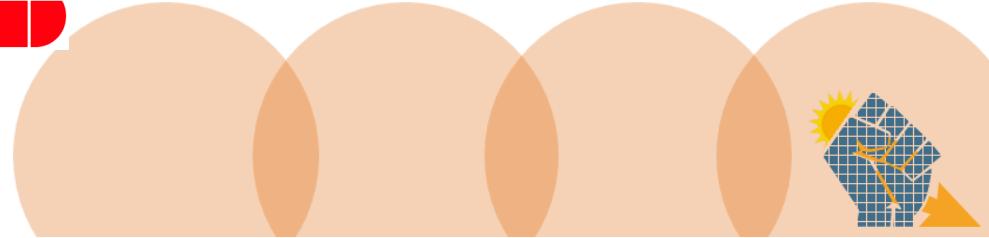


Batteries



EverExceed[®]
power your applications

BOS
Parts



Standalone Solar Solutions

Component-Based Solar Solutions for your **home or office**

CONTACT US TO DISCUSS YOUR PROJECT (090 6992 0242, sales@ronchoenergy.com)

Payment Options ¹



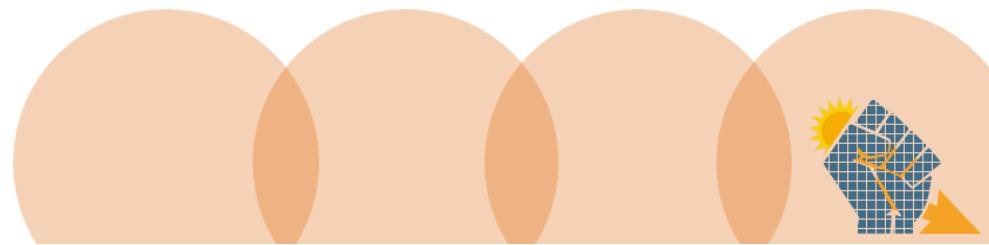
A **Direct purchase** requires full payment for the solution. This is attractive to customers that want to own the solution upfront.

A **Hire purchase** allows our customers to split the payment for the solution over several months.

A **Lease agreement** allows our customers to rent (but not own) the solar solutions.

A **Power Purchase Agreement** is similar to the lease arrangement, except that the client only pays for kWh consumed from the system. This option is only available to businesses.

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Energy Back-Up Solutions

Back-Up Solutions for your **home, office and facilities**

(INVERTER + ENERGY STORAGE)



Energy Back-Up Solutions

Back-Up Solutions for your **home, office and facilities**

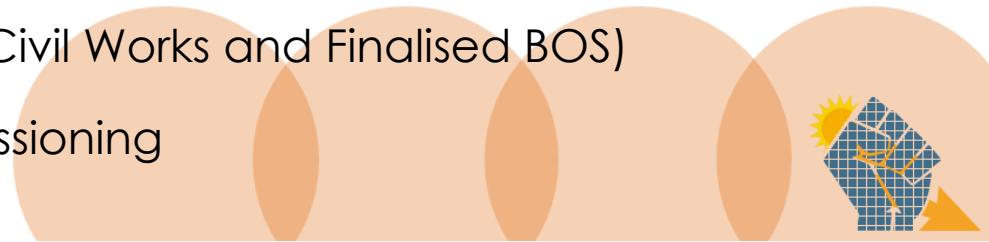
Energy storage systems are best for clients that:

- ✓ receive at least 6 hours of electricity (from grid or generator);
- ✓ Want to reduce or stop spending money on fuel.

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5-stage Installation Process

- Capture Client Requirements
- Preliminary System Design (Establish main system components)
- Site Assessment
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- Mobilisation, Installation & Commissioning



Energy Back-Up Solutions

Back-Up Solutions for your **home, office and facilities**

Supported Components / Products

Inverter



Storage



BOS
Parts



Energy Back-Up Solutions

We are technology flexible, and can deploy your project using:



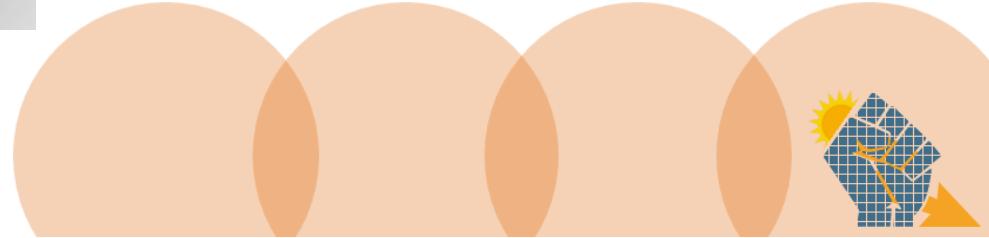
Lead-Acid Battery Stacks



Vanadium Redox Flow Battery



Lithium Ion Batteries



Energy Back-Up Solutions

Flagship Product – Lead Acid Batteries (Trojan)

Lead Acid battery at its best !!! Designed for Nigerian weather.



Technology

Deep cycle, Flooded

DoD vs Cycle

1650 cycles @ 50% DoD

Expected Lifetime

8 yrs based on IEC61427

Supported Applications

Solar self-consumption

Warranty

Back-up power

>1 yr (case by case)

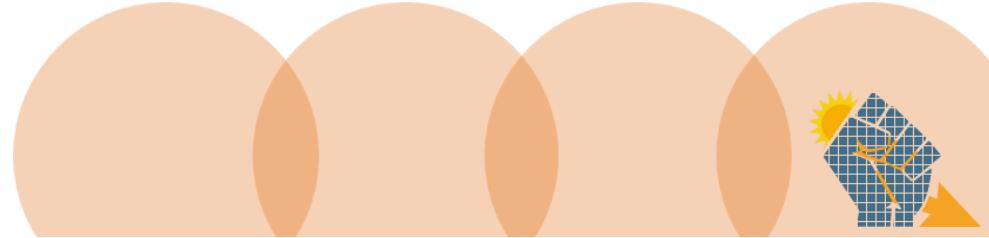
Smart carbon integrated to compensate for PSOC.



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Energy Back-Up Solutions

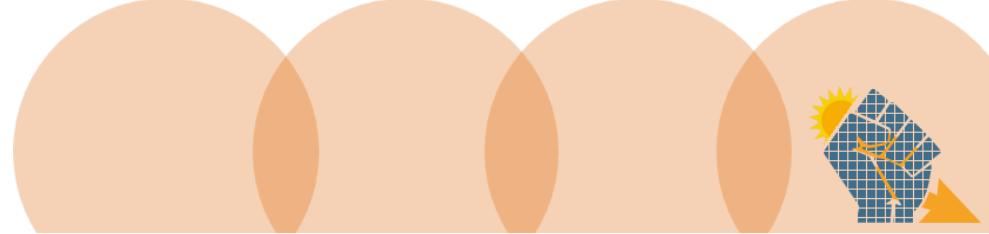
Flagship Solution – Lithium Ion Batteries (Tesla Power Wall)

Seamless backup power. With or without solar.



Usable Capacity	13.5 kWh
Depth of Discharge	100%
Efficiency	90% round-trip
Power	7kW peak / 5kW continuous
Supported Applications	Solar self-consumption Back-up power
Warranty	10 years
Scalable	Up to 10 Powerwall units

*** 1 Power Wall is equivalent to 11 units of 12V-200Ah Lead Acid battery.**



Energy Back-Up Solutions

Flagship Product – Flow Batteries (RedT Vanadium Flow Machine)

Secure your power supplies and cut diesel costs with redT at the heart of your off-grid system

Facilities often suffer from unreliable, expensive energy connections even when a backup diesel generator is provided. By storing and time shifting generated energy, redT flow machines provide dependable power to keep your site operating 24/7.

- ✓ Rugged
- ✓ Durable and secure
- ✓ Low maintenance
- ✓ Remote monitoring
- ✓ Discharge power for over 4 hours and cycle many times per day.



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Energy Back-Up Solutions

Telecomms and Outdoor Installations

flexenclosure

eSite 

eSite™ x10 is the world's first hybrid power system purpose built for outdoor telecom sites and to outdoor telecom standards. It has a sealed, patented, tamper-proof unit with passive convection cooling, no filters, no moving parts and it requires no maintenance.

The eSite™ x10 is specifically designed for off-grid and bad grid cell sites. It cuts diesel costs, CO2 emissions and energy related OPEX by up to 90%.



CONTACT US TO DISCUSS YOUR PROJECT



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Energy Back-Up Solutions

Telecomms and Outdoor Installations

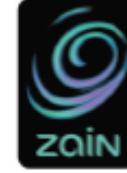
flexenclosure

eSite 

AWARDS WON



CUSTOMERS THAT USE THIS SOLUTION



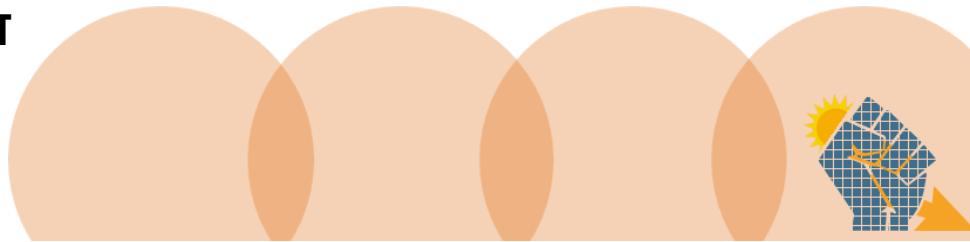
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Energy Back-Up Solutions

Back-Up Solutions for your **home, office or facility**

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Payment Options ¹

	
Direct purchase	Hire purchase
	
Lease Agreement	Power Purchase Agreement

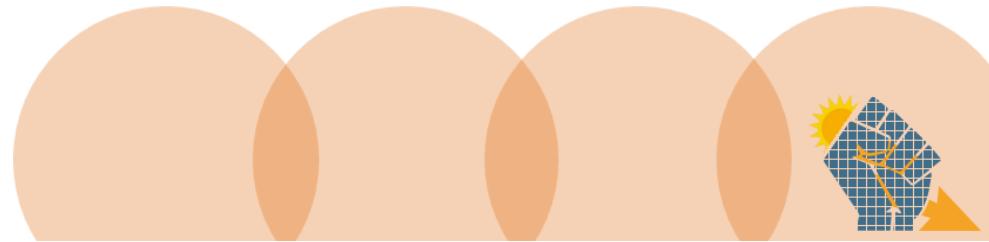
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Solar-Powered Grids

Isolated Mini-Grid



<http://www.ennera.com/en/detail-solution/minigrids>

Solar-Powered Grids

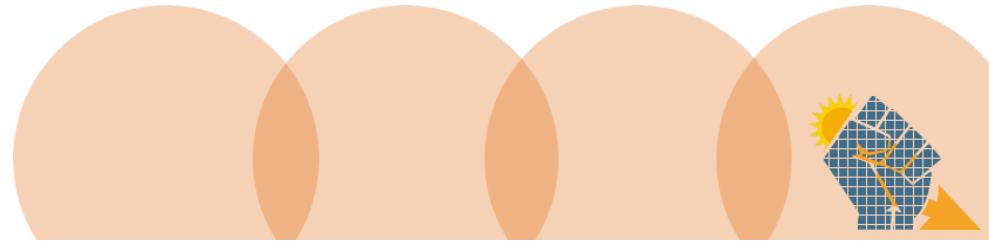
Isolated Mini-Grid

Access to electricity is the backbone of the economic development of a country. There are currently more than 1,500 million people in the world with no access to electricity at home.

The development of mini-grids is a competitive alternative to the expansion of national transmission and distribution grids, which can be commercially infeasible for some communities.

Our Mini Grid solutions are:

- ✓ Designed to operate under extreme conditions (remote locations)
- ✓ Ease of handling and operation: remote control
- ✓ Limited maintenance
- ✓ Quick installation: standard industrial container
- ✓ Customised solution for each situation
- ✓ Competitive pricing



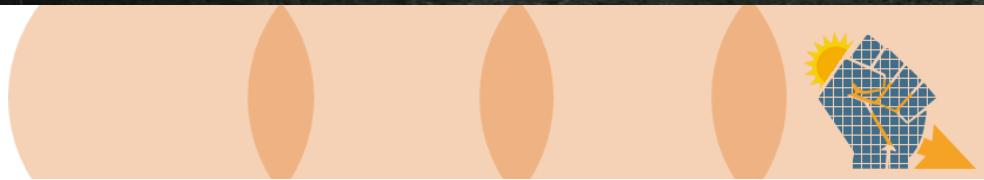
Solar-Powered Grids

Isolated Mini-Grid – Compact Containerised Solution

Isolated Mini-Grids comprise three main sub-systems: generation; distribution; and demand side. We offer containerised solutions that significantly reduce implementation, commissioning & maintenance time.



<http://www.ennera.com/en/detail-solution/minigrids>



Solar-Powered Grids

OEM Support for our Solar-Powered Grid projects



Technical & Project Partners for over 3 years



Orb Energy Private Limited designs, manufactures, markets, sells, installs, and services solar photovoltaic and solar water heating systems for residential and commercial customers. The company's products include solar inverters, solar lighting, solar street lights, solar rooftop, solar power plants, solar water pumping system, modular and centralized solar water heating systems, and heat pumps. It also franchises its branches to customers to sell its products. The company offers its products through a network of branches. Orb Energy Private Limited was founded in 2006 and is based in Bengaluru, India with an additional office in Singapore.

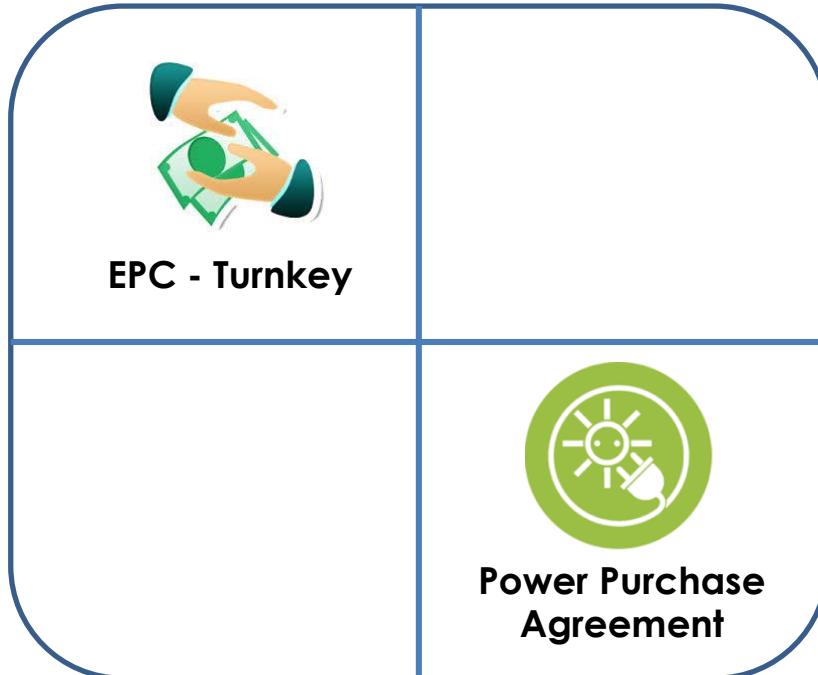
As a leading global specialist in photovoltaic system technology, SMA is setting the standards today for the decentralized, digital and renewable energy supply of tomorrow. More than 3,000 SMA employees in 20 countries have devoted themselves to this task. Our innovative solutions for every type of photovoltaic application offer people and companies worldwide greater independence in meeting their energy needs. In collaboration with our partners and customers, we are helping people transition to a self-sufficient, decentralized and renewable energy supply.

Solar-Powered Grids

Isolated Mini-Grids

CONTACT US TO DISCUSS YOUR **MINI-GRID PROJECT**
(090 6992 0242, sales@ronchoenergy.com)

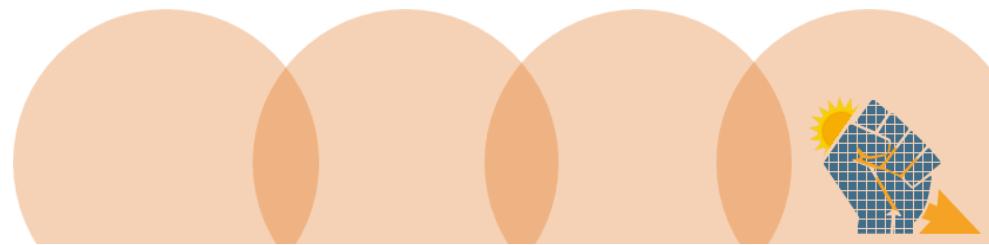
Payment Options ¹



An **EPC-Turn Key arrangement** The client purchases a mini-grid system on a turnkey basis. Roncho Energy will take charge of the engineering, procurement and construction of the plant, as well as of the preliminary feasibility studies and the permits. This is attractive to customers that want to own and run a mini-grid solution in order to sell power to a community.

In a **Power Purchase Agreement** Roncho Energy shall be in charge of EPC as well as funding and operating the plant. This is the option that allows a greater flexibility. However the client will agree to consume an agreed quantity of electricity.

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Solar Enabled Applications

Solar Street Lights



Commercial Solar LED Street Lighting

Roncho Energy's solar powered street lighting systems are an efficient means to provide lighting without the need for standard utility power.

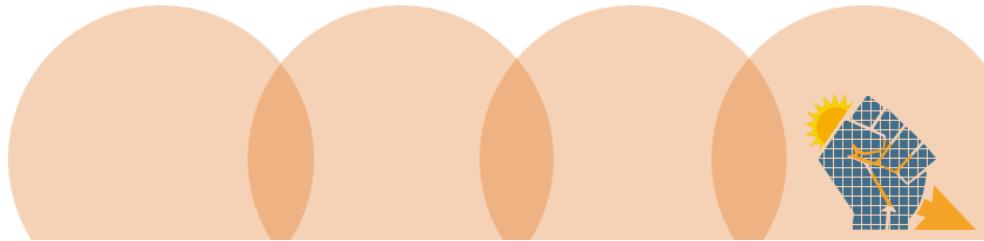
- ✓ Cost savings (No monthly bills).
- ✓ Neat and safe (No Cables).
- ✓ Several sizes (30W, 40W, 60W) available for different applications (highways, freeways, neighbourhood streets, rural roads, etc.)
- ✓ Improve security, sustainability and an overall green image.



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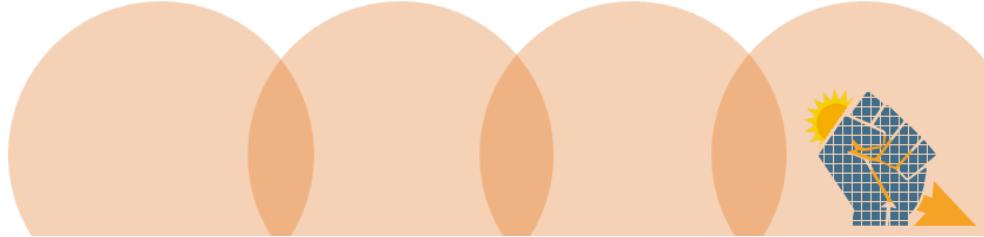


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Solar Enabled Applications

Solar Water pumps



Solar Enabled Applications

Solar water purification



Containerised Solar Water Purification

Roncho Energy's field tested and experienced water treatment technologies can come equipped with different filtration technologies depending on the raw water:

- Ultrafiltration (river water, lake water, well water).
- Reverse Osmosis (sea water, salted well water, brackish water)

The ultrafiltration membrane removes organic contaminants, viruses, bacteria, cysts, etc. down to a size of 0.04 micron.

In addition to water desalination the Reverse Osmosis technology removes all contaminants, viruses, bacteria, cysts etc. down to a size of 0.01 micron.

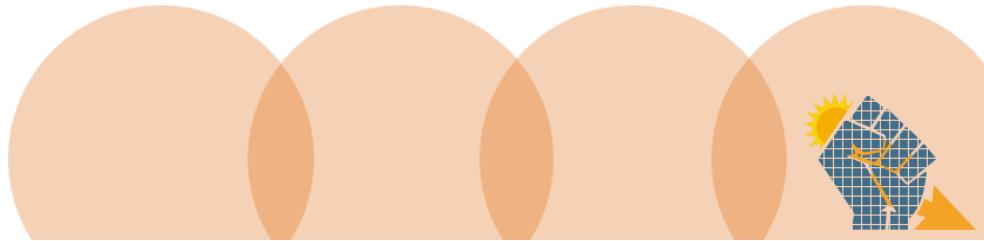
No toxic chemical treatment is applied.



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Solar Enabled Applications

Solar DC Air-conditioner: Cool your home & office from Solar Energy



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Solar Enabled Applications



48V Indoor Wall-Mount Unit



48V Outdoor Unit



48V DC Power System

Solar DC Air-conditioner

12,000 BTU DC Air Conditioner For Off-Grid Solar & Telecom Applications. It's designed to conserve power, and operate reliably for many years without maintenance

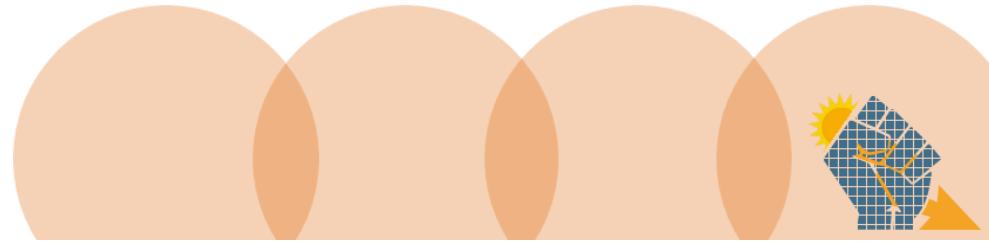
- System can be designed for 10, 15, 20 and 24 hr Operation.
- All DC - No inverter or AC supply needed
- Variable Speed & Capacity
- SeaSpray Anti-Corrosion Technology
- Can provide Cooling or Heating
- Exceptionally Quiet Operation



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Solar Enabled Applications

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Payment Options ¹

	
Direct purchase	Hire purchase
	
Lease Agreement	Power Purchase Agreement

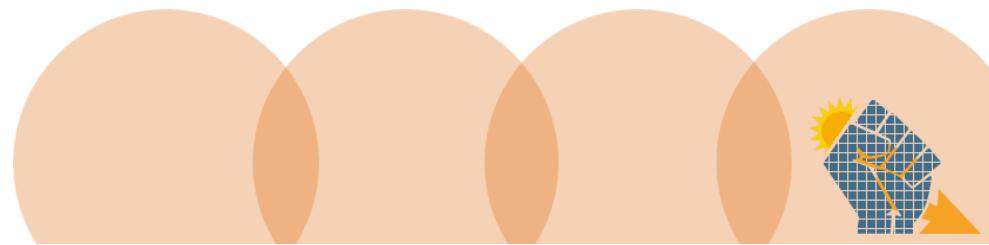
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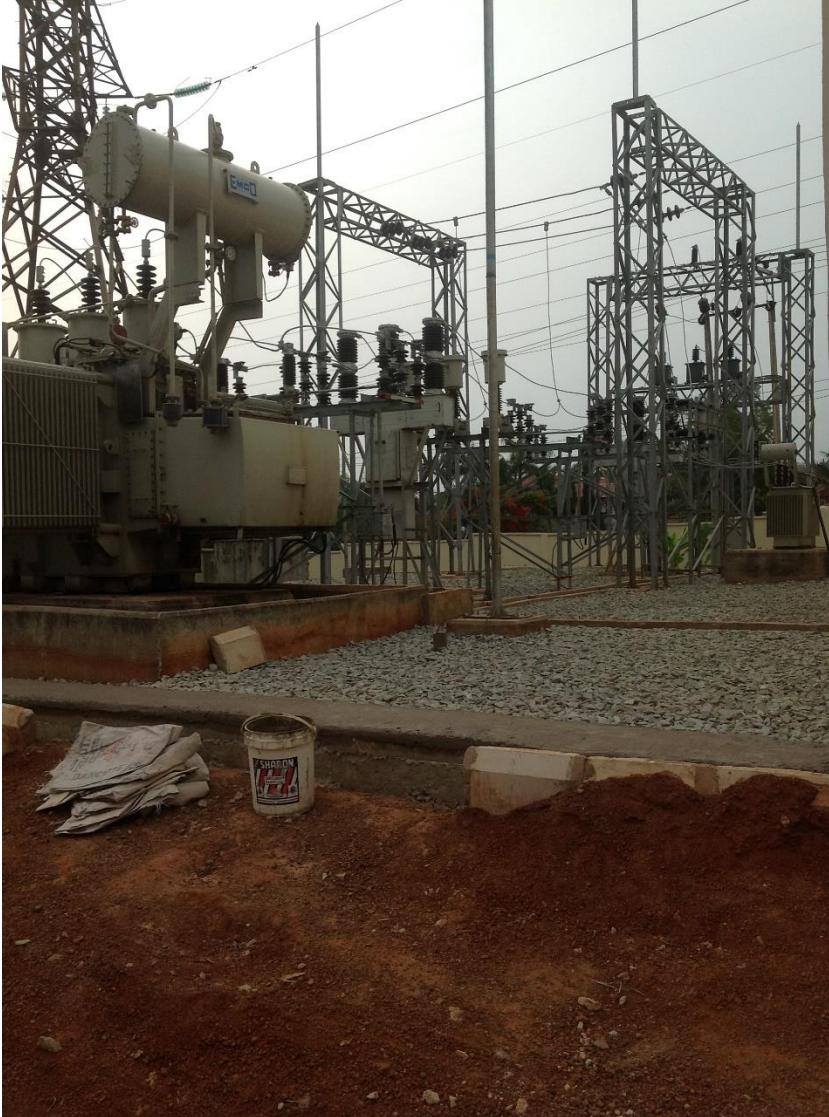
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Grid-Extension Projects



Roncho - Waltech Joint Venture

To complement their suite of offerings, Roncho Energy and Waltech Engineering entered into a Joint Venture.

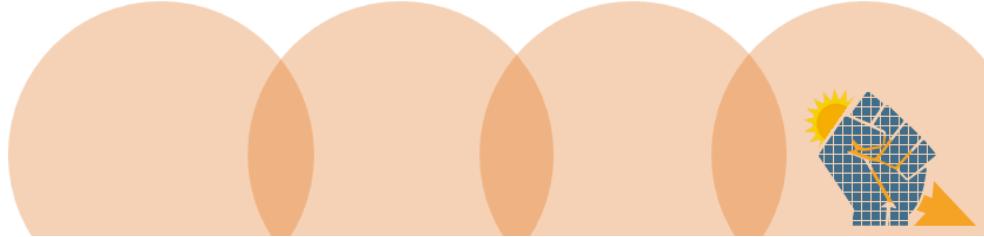
This Joint Venture boasts a combined expertise of over 30 years in the grid extension project sector.

Contact Us to discuss your grid extension and HVAC projects.

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Energy Project Portfolio



Case Study

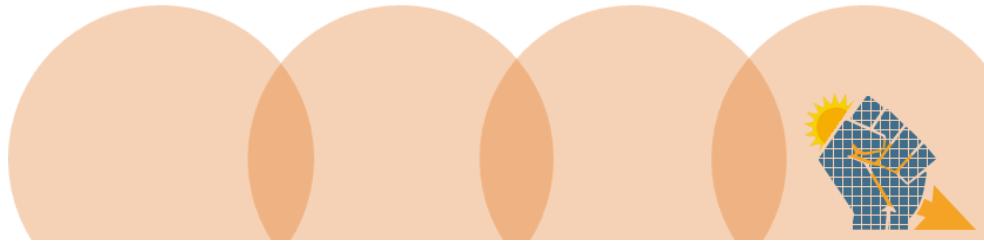
- **System Integration: 3kW PV solution with battery bank and grid input for home at urban location.**
 - System Integration (Integration Completed, O&M contract ongoing)



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Case Study

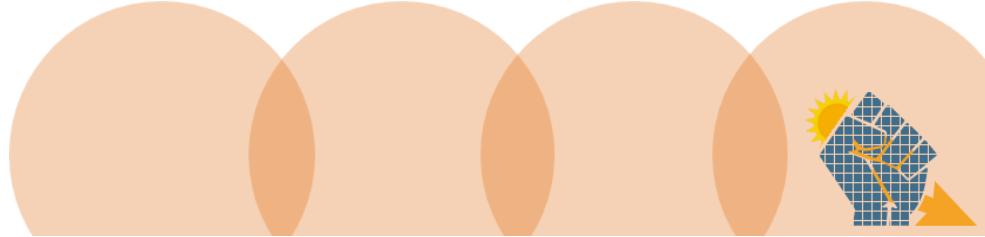
- **Case Study: 2kW islanded PV solution with battery bank for home at rural location.**
 - System Integration (Integration Completed, O&M contract ongoing)



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Case Study

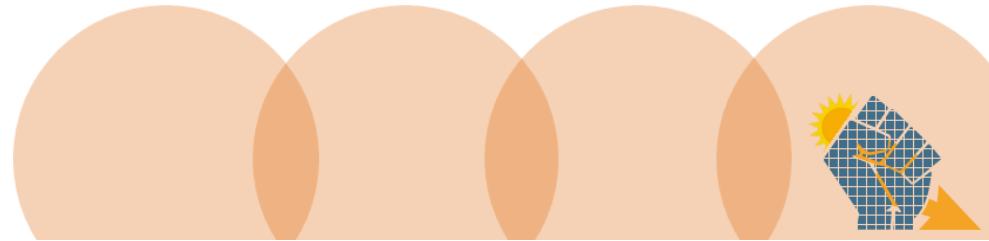
- **System Integration: 4kW PV solution with battery bank and grid input for home at urban location.**
 - System Integration (Integration Completed, O&M contract ongoing)



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Case Study

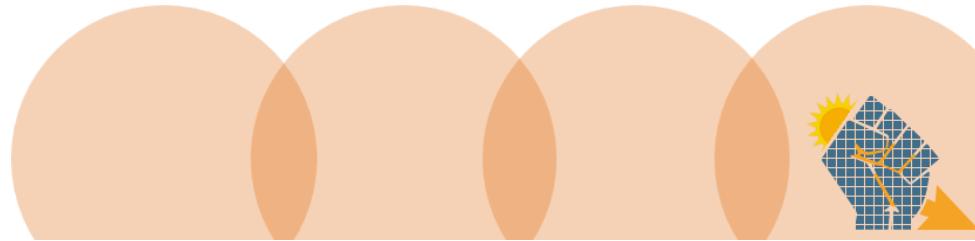
- **Case Study: 40kW PV – Diesel hybrid plant for bank at peri-urban islanded location.**
 - Project Development | System Integration | O&M)
 - Development Completed



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Case Study

- **Case Study: Hybrid Battery-back up system with smart Auto Transfer Switch for bank at urban islanded location.**
 - System Integration & O&M (Awarded – Execution Ongoing)



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Case Study

- **Case Study: Energy storage Infrastructure management of a bank's nationwide network (286 locations, 20.6 MWh of storage)**
 - Process Optimisation | O&M (Awarded, Completed)
 - Completed (Handled a total of 8590 batteries)



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Case Study

- **Case Study: Solar Street Lighting for an Estate road network**
 - Project Development | System Integration | O&M)
 - Completed



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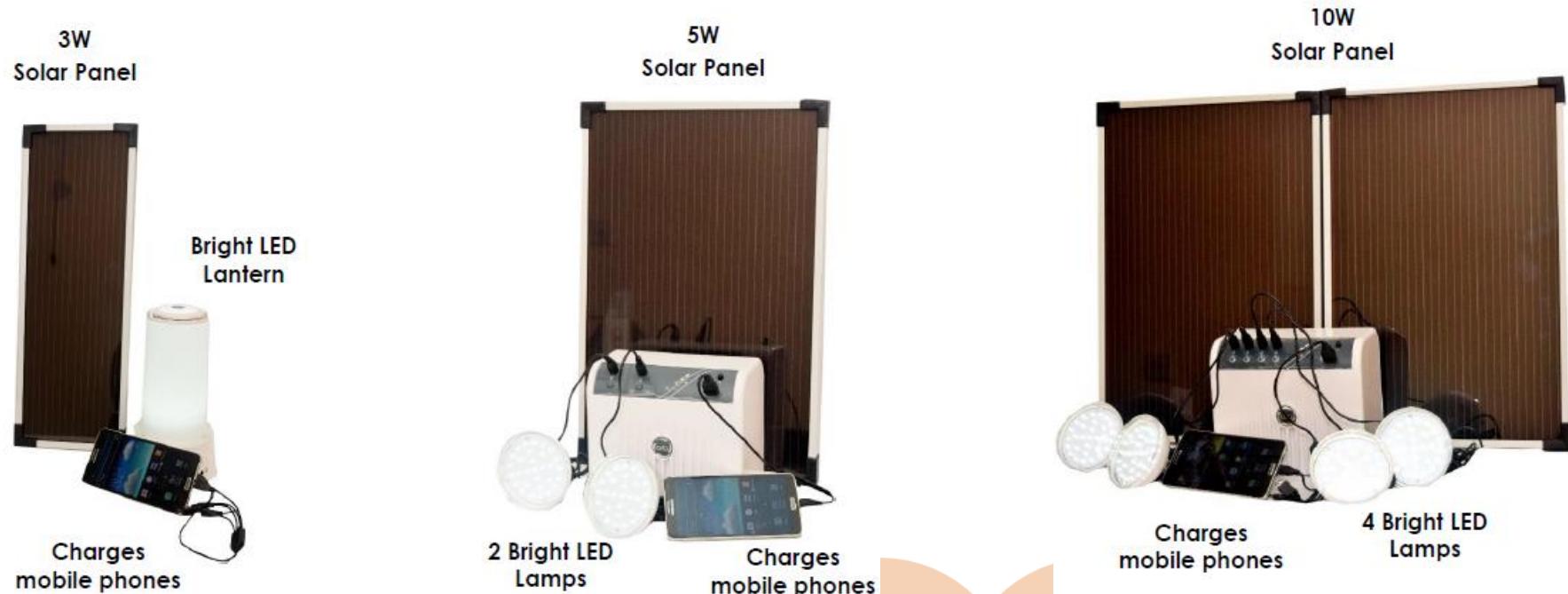


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Case Study

- **Case Study: 57kW Dense penetration of Small Solar Home Systems for DFID-UKAID**
 - System Integration (Awarded, Execution Ongoing)
 - Project Scope: 1,140 small solar solutions installed to improve access to electricity.





**RONCHO ENERGY
SERVICES LTD**

Thank You

For any inquiries, contact:
info@ronchoenergy.com

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