



Solapac

Solapac provides end-to-end containerised solar PV and battery storage solutions designed specifically for commercial, industrial, and community applications within the growing Behind the Meter energy sector. Solapac also delivers integrated water purification systems, solar carports with EV-charging capability, and flexible project financing options.

Company Background

Solapac, a South African renewable energy specialist, has been operating for 15 years, offering a wide range of sustainable solutions including grid-tied, hybrid, and island solar PV systems, solar carports, battery storage solutions, and ISO containerised mini off-grid power systems. As a subsidiary of Greenheart Energy, established in the UK in 1999, Solapac benefits from extensive experience and a proven track record in delivering and managing large-scale solar PV projects. Solapac provide integrated, reliable energy solutions tailored to commercial, industrial, and community energy needs across Africa.





Energy Solutions

Solapac

Solapac provides end-to-end solar energy systems that secure reliable power and long-term savings for clients. The Solapac is a containerised solar PV and battery storage mini-utility designed specifically for commercial use, offering affordable, customisable, and uninterrupted energy solutions.

Rapid Deployment & Capacity

Solapac is housed in either a 20 or 40-ft shipping container, "installable in a few hours to immediately supply renewable energy. Each mobile unit can provide up to ~44 kW of "grid-quality" three-phase power, with integrated batteries storing energy for use at night or during outages.

Protection from Tariff Hikes

With electricity costs climbing annually, solar offers a crucial hedge. Solapac lets clients lock in low-cost power for 20+ years. This insulates businesses and households from rising energy bills, shortening payback periods and improving ROI.

Energy Security

By combining solar PV with battery storage, Solapac guarantees uninterrupted power through load-shedding and grid failures. Clients can continue operations during outages, maintaining business continuity and critical services.

Asset Value & Sustainability

Investing in a Solapac system cuts costs and upgrades your property. Solar installations typically increase real estate value and businesses benefit from a greener operation with lower emissions

Energy Solutions

Solapac

Ex Works Price

Product Name	Functionality	USD	ZAR	Off Grid	Container Size (ISO ft)	Solar Capacity (kWp)	Battery Storage (kWh)	Electrical Output	Weight (tonnes)	Footprint (unit)
Solapac_Power20	Power	\$3 2,641.29	R587,543.18	Yes	20ft / 6m	33.2	0	3-phase	3.9	17m x 9m
Solapac_PowerStore20-30	Power & storage	\$4 0,819.84	R734,757.13	Yes	20ft / 6m	33.2	30	3-phase	5.9	17m x 9m
Solapac_PowerStore20-40	Power & storage	\$5 2,946.99	R953,045.80	Yes	20ft / 6m	33.2	40	3-phase	5.9	17m x 9m
Solapac_PowerStore20-60	Power & storage	\$4 8,772.42	R877,903.53	Yes	20ft / 6m	33.2	60	3-phase	10.05	17m x 9m
Solapac_Power40	Power	\$5 0,013.94	R900,250.93	Yes	40ft / 12m	62.25	0	3-phase	7.8	17m x 18m
Solapac_PowerStore40-60	Power & storage	\$6 6,145.07	R1 ,190,611.28	Yes	40ft / 12m	62.25	60	3-phase	11.8	17m x 18m
Solapac_PowerStore40-80	Power & storage	\$7 0,866.69	R1 ,275,600.50	Yes	40ft / 12m	62.25	80	3-phase	11.8	17m x 18m
Solapac_PowerStore40-100	Power & storage	\$7 4,976.60	R1 ,349,578.76	Yes	40ft / 12m	62.25	100	3-phase	20.1	17m x 18m



Solar Carports

Solapac's solar carports combine efficient solar power generation with practical parking solutions. These structures provide shade and weather protection for vehicles while harnessing solar energy to generate electricity for businesses, commercial facilities, and public spaces.

Dual-Purpose Design

Solar carports integrate photovoltaic panels into their structure, converting parking areas into renewable energy hubs without requiring additional land space.

EV Charging Integration

Designed to accommodate electric vehicle (EV) chargers, the carports provide convenient charging points for fleet vehicles, employees, and customers while reducing strain on the grid.

Scalable and Customisable

Modular by design, Solapac's solar carports can be tailored to suit various parking lot sizes and energy needs, making them ideal for retail centres, office parks, industrial facilities, and universities.

Energy Storage Compatibility

The system can be integrated with battery storage, allowing excess energy to be stored and used when needed, ensuring uninterrupted power supply and maximising efficiency.

Additional Features

Solapac's solar carports can be equipped with rainwater collection systems, LED lighting, and monitoring tools for optimised performance and sustainability.



Protecting Your Investment with Magnelis®

Solapac provides end-to-end solar energy systems that secure reliable power and long-term savings for clients. We build our solar structures to last. Solapac integrates Magnelis®, an advanced metallic coating that ensures superior protection for solar mounting structures, particularly suited to harsh conditions.

Benefits Include:

Corrosion Resistance

Magnelis® provides superior protection against corrosion, particularly in harsh environments such as coastal regions or industrial areas.

Self-Healing Properties

The coating offers a self-repairing effect on cut edges, reducing long-term wear and extending the life of the installation.

Low Maintenance & Cost Efficiency

By reducing the need for frequent maintenance and replacements, Magnelis® helps lower overall ownership costs over the system's lifespan.



Water Purification Solution

Solapac's water purification solution ensures a dependable supply of clean water for residential and commercial needs. By integrating advanced water purification units directly into the solar container, each Solapac can deliver thousands of liters of potable water from rivers, lakes, or boreholes – all powered by the sun.

High Capacity Filtration

Each purifier produces up to 3,000 liters per hour of clean water. A Solapac can host up to three units, for a combined output of ~9,000 L/hour of World Health Organization-standard water.

Effective Purification Technology

The system uses a robust multi-stage process (automated pre-filters, UV-C disinfection, and optional dosing) to convert contaminated sources into safe, great-tasting water. It removes pathogens and turbidity from freshwater sources, producing clean water on-site.

Fast, Simple Deployment

Solapac's water unit is mobile and user-friendly. Setup takes minutes: minimal training is required to operate the largely automated system (it even features self-cleaning backwash and remote monitoring).

Efficiency & Low Operating Cost

Powered by solar, the purification has low energy consumption and incurs only a minimal cost per liter of output.

Versatile Use Cases – Ideal for both residential and commercial applications. Farmers can irrigate or provide livestock with safe water, resorts can serve guests clean water off-grid, and schools or clinics can secure their water independence.

Technical Specifications and Pricing

20-foot Container (Entry-Level):

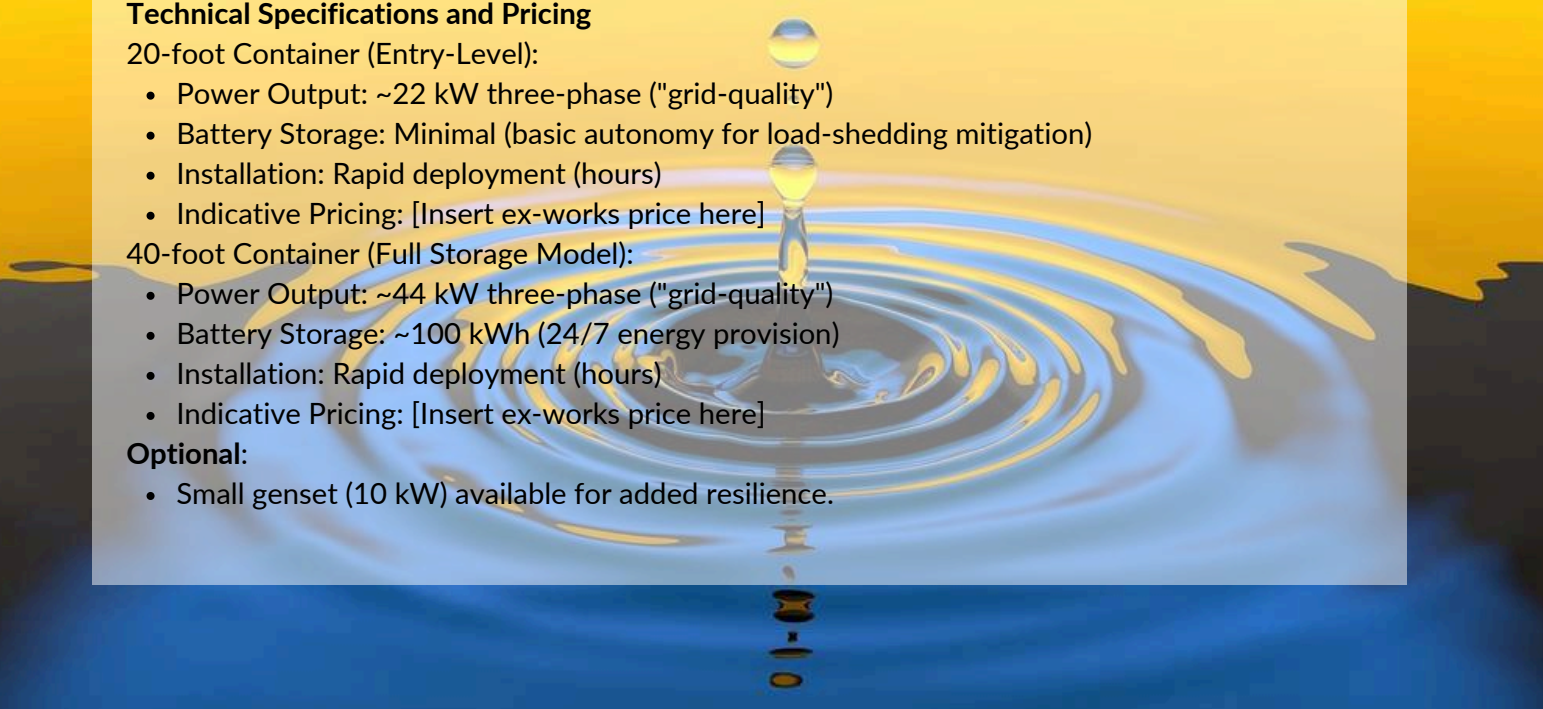
- Power Output: ~22 kW three-phase ("grid-quality")
- Battery Storage: Minimal (basic autonomy for load-shedding mitigation)
- Installation: Rapid deployment (hours)
- Indicative Pricing: [Insert ex-works price here]

40-foot Container (Full Storage Model):

- Power Output: ~44 kW three-phase ("grid-quality")
- Battery Storage: ~100 kWh (24/7 energy provision)
- Installation: Rapid deployment (hours)
- Indicative Pricing: [Insert ex-works price here]

Optional:

- Small genset (10 kW) available for added resilience.



Water Purification Solution

Séon UV – Freshwater Small Groups

Séon UV is a revolutionary water purification system designed to deliver safe, drinkable water directly from the source. Equipped with a robust triple filtration system and advanced LED Ultraviolet (UVC) technology, Séon UV effectively transforms even highly contaminated freshwater into clean, great-tasting drinking water.

Built to withstand the toughest conditions, Séon UV features durable, military-grade housing. Optional add-ons, such as automated disinfectant dosing and a cold weather pack, provide additional flexibility. Easy operation and the capability to purify up to 600 liters per hour make Séon UV a fast, dependable solution for safe, clear, bottled-water quality—anytime, anywhere.

Séon RO Seawolf – Pure Water from the Sea

Séon RO Seawolf turns seawater into safe drinking water using reverse osmosis (RO), a high-efficiency recovery pump, and UVC LED disinfection, all housed in durable military-grade casing. Optional add-ons include automated disinfectant dosing and a cold weather pack.

Séon UVC – Freshwater Large Groups

Séon UVC – Compact, Powerful Water Purification

Séon UVC is a breakthrough mobile water purifier, delivering high volumes of safe drinking water directly from the source. With a robust purification system and integrated automated dosing, it transforms contaminated freshwater into clean, great-tasting drinking water. Developed with input from defence and disaster response teams, Séon UVC combines proven technology with durability and simplicity.

Séon ROC Seawolf – Seawater Large Groups

Séon ROC Seawolf – Robust, Portable Water Purification

Designed with input from defence and emergency services, Séon ROC Seawolf is a durable, chassis-mounted system extracting pure water from seawater.

Simple Operation: Connect colour-coded hoses, position inlet in water source, and activate for instant, drinkable water.

With a high-performance, energy-efficient reverse osmosis (RO) system and integrated high-efficiency recovery pump, Séon ROC Seawolf reliably delivers potable water.

Housed in a military-derived chassis engineered for extreme conditions, its compact design allows easy transport by four people, fitting seamlessly into logistical chains.

Séon IFC Seawolf – Seawater High Output

Séon IFC – High-Output Water Purification in a Shipping Container

Séon IFC is a powerful mobile water purification system housed within a standard shipping container for easy transport and setup. With high-efficiency reverse osmosis, it processes up to 6,000 liters (6m³) per day directly from seawater, ideal for emergency response, large base camps, military, and commercial applications.

Features include an automated disinfectant generation system producing non-toxic disinfectant for safe post-purification water protection.

Simple Deployment: Ship to site, connect power, and start purifying water directly from the source. Séon IFC provides a complete water solution wherever you need it.

Séon RO Seawolf – Seawater Small Groups (additional details)

Séon RO Seawolf is a leader in portable water purification, turning seawater into safe, drinkable water. Featuring a reliable reverse osmosis (RO) system, high-efficiency recovery pump, and UVC LED disinfection, it's built for tough conditions.

Housed in durable, military-grade casing, Séon RO Seawolf offers optional features like automated disinfectant dosing and a cold weather pack.

Food Production

Solapac's integrated energy-and-water approach directly supports South African farmers in improving productivity and sustainability. By providing off-grid power and purified water, Solapac enables modern irrigation and agri-processing in areas with unreliable electricity or scarce rainfall.

Improved Irrigation for Higher Yields

With Solapac, farmers can pump water for irrigation consistently, no longer limited to rain-fed cycles. Reliable solar-powered irrigation allows for better watering schedules, leading to higher crop yields and improved profitability.

Reduced Operational Costs

Solapac replaces expensive diesel generators and fuel needed to run water pumps in remote farms. Over multiple seasons, these savings can be substantial.

Resilience and Food Security

Access to continuous power and water buffers agriculture against climate variability and infrastructure failures. Even during load-shedding or drought periods, farmers with Solapac can continue to irrigate crops, preventing losses.

Empowering Rural Development

By providing not just irrigation, but also electricity, Solapac opens opportunities for agro-processing and value addition on-site.



Where We've Made a Difference

Solapac has successfully implemented large-scale solar PV and off-grid energy solutions across Africa, supporting various sectors, including commercial, industrial, and community-based projects. These projects demonstrate Solapac's ability to provide **customised, scalable renewable energy solutions** that meet diverse energy needs.

Notable installations include:

- **Benin:** 14MWp PV grid-tied utility, supporting commercial and industrial operations.
- **Ghana:** 10MWp distributed PV rooftop system for commercial and industrial (C&I) clients.
- **Malawi:** 50MWp PV grid-tied utility, enhancing power stability in the region.
- **Guinea:** 70MWp PV / 10MW ESS grid-tied system, integrating battery storage for enhanced energy reliability.
- **Nigeria:** 15MWp distributed behind-the-meter C&I solution, reducing energy costs for businesses.

Solapac's experience in delivering mini-grid, solar carport, and standalone solar PV solutions has positioned the company as a trusted partner in renewable energy projects. The company works with businesses, municipalities, and rural communities to implement sustainable, cost-effective energy systems that provide long-term value and resilience in diverse operating environments.



Project Financing

Solapac recognises that upfront cost is a major barrier to adopting renewable solutions, so it offers a range of financing options and incentives:

Government-Backed Financing (UKEF)

Through UK Export Finance, Solapac projects can access attractive credit facilities supported by the British government, reducing upfront payment requirements and spreading costs over many years.

Private Sector Support

Solapac partners with private financiers to offer flexible financing models.



Let's Connect!

South Africa
Solapac (Pty) Ltd
Unit F18, Pinewood Square
33 Riley Road, Sandton, 2196
www.solapac.co.za

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Solapac | Overview of systems

Solapac is a uniquely packaged, versatile renewable utility system that can be quickly installed and commissioned where the power is needed. The Solapac ensures reliable "grid-quality" 3-phase (400V) power is supplied throughout the day & night enabling commerce, education, healthcare, and growth.

Equipped with remote monitoring and WiFi, the Solapac is modular and can be expanded and customised to suit the Customer's requirements

20ft Systems

System	Solapac Power20	Solapac PowerStore 20-30	Solapac PowerStore 20-60										
Overview	Power	Power & storage	Power & Storage										
kWp size	33.2 kWp	33.2 kWp	33.2 kWp										
Battery Energy Storage Size	-	24kWh	52.8kWh										
Electrical output	3-phase	3-phase	3-phase										
Dimensions (for transport)	6.056m (l) x 2.438m (w) x 2.592m (h) Standard ISO 6mtr Dry Van	6.056m (l) x 2.438m (w) x 2.592m (h) Standard ISO 6mtr Dry Van	6.056m (l) x 2.438m (w) x 2.592m (h) Standard ISO 6mtr Dry Van										
Dry weight (shipping) – subject to final specification	3.9 tonnes	5.9 tonnes	10.05 tonnes										
Footprint (once installed)	17m (l) x 9m (w)	17m (l) x 9m (w)	17m (l) x 9m (w)										
Standard Functionality	<ul style="list-style-type: none"> 3-phase "grid quality" supply Plug & play rapid installation with minimal skills-set requirement locally Remote monitoring and alerts aiding efficient operations Tier 1 / market leading components – service / maintenance / warranty Flexible generation options & easy integration with on / off-grid assets Modular – simple to plug units together and increase power available 												
PV modules	<p>80 x 415 watt peak ("wp") super high power PERC modules = 33.2kWp</p> <p>Characteristic per module</p> <p>80 x dual-cell polycrystalline</p> <p>Efficiency = 18.4%</p> <p>VMPP = 32.6V</p> <p>IMPP = 10.43A</p> <p>Isc = 10.98A</p> <p>Voc = 39.6V</p> <p>Temp Coefficient (MPP) = -0.37%</p> <p>MORE RELIABLE (THANKS TO HALF CUT CELL TECHNOLOGY):</p> <ul style="list-style-type: none"> Lower internal current, lower hot spot temperature Cell crack risk limited to smaller area of the cell Innovative symmetrical module design means better shading tolerance Heavy snow load up to 5400Pa and increased wind load up to 3600Pa 												
Mounting system	<p>Proprietary designed Solapac mounting system</p> <p>Robustly designed for harsh environments with life expectancy of 25+ years</p> <p>Hinged-fixtures to accommodate various gradients</p> <p>Fixed-framed @ 10deg pitch – optimising system performance</p> <p>Modules slide and lock in place</p> <p>Higher system performance per m²</p> <p>In-built security features including individual PV module locking and secure end-clamps</p>												
Hybrid inverter / controls	<ul style="list-style-type: none"> All in one hybrid inverter Programmable working mode Supports remote control of Diesel Generator Touchscreen LED <p>AC (Off-Grid)</p> <table> <tr> <td>Apparent Power</td> <td>33kVA</td> </tr> <tr> <td>Rated power</td> <td>30kW</td> </tr> <tr> <td>Max DC Power</td> <td>45kW</td> </tr> <tr> <td>Max AC Power (10Mins)</td> <td>33kW</td> </tr> <tr> <td>Surge AC Power (1min)</td> <td>36kW</td> </tr> </table>			Apparent Power	33kVA	Rated power	30kW	Max DC Power	45kW	Max AC Power (10Mins)	33kW	Surge AC Power (1min)	36kW
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	Rated voltage Rated current	400V 43A	
	Rated frequency	50Hz	
	Overload Capability	110% - 10mins 120% - 1min	
	AC connection	3/N/PE	
	AC Input	60kVA	
Battery cells		Solapac PowerStore 20-30	Solapac PowerStore 20-60
	Storage Capacity	30kWh	60kWh
	Max Depth of Discharge (DoD)	90%	90%
	Energy @ 80% DoD	24kWh	48kWh
	Energy @ 90% DoD	27kWh	54kWh
	Technology	LiFePO4 (Lithium Ion Phosphate)	LiFePO4 (Lithium Ion Phosphate)
	Max / Cont. Discharge Current (A)	150/100	150/100
	Max / Cont. Discharge Power (kW)	30kW	40kW
	Nominal Voltage (V)	410V	614V
	Continuous Discharge Rate	30kW	40kW
	Maximum Discharge Rate (5mins)	38kW	50kW
	Surge Discharge Rate (15 secs)	38kW	50kW
Maximum Charge Rate (5mins)	30kW	40kW	
Service Life	>16 years (>5,500 Cycles) @ 80% DOD >20 years (>7,500 Cycles) @ 50% DOD		
Protection	Shunt Trip Circuit Breaker Can be tripped by BMS if critical fault		
	Manual Reset / Overcurrent / Cell under & over voltage / temperature / weak cell detection / minimum SOC control		
Communication	3G modem – roaming SIM Option for dual SIM functionality <ul style="list-style-type: none"> • Dedicated Operation and Asset Management • Dedicated WiFi for Local Area Network (“LAN”) 		
Structure / Plant room	Dedicated, secure plant room <ul style="list-style-type: none"> • Hybrid inverter / Controls • Battery Energy Storage System • Meters & monitoring Climate controlled to maintain performance & longevity of equipment		
Customizable internal usage	Following the installation of the Solapac, the container is an open space that can be adapted for use: <ul style="list-style-type: none"> • Agri-business Cold storage Milling facilities Fish farming • Manufacturing Welding sets Commercial bakery • Office facility Educational Secure storage facility • Medical centre clean room Community hub 		
Additional functionality	Water purification <ul style="list-style-type: none"> • 420 ltrs per hour • 7020 ltrs per hour • Option for salt / brackish water source on the above Utility Metering and Billing Generator back up Fire Suppression system Access Control		

System	Solapac Power40	Solapac PowerStore 40-60	Solapac PowerStore 40-100																
Overview	Power	Power & storage	Power & Storage																
kWp size	62.25 kWp	62.25 kWp	62.25 kWp																
Battery Energy Storage Size	-	60kWh	100.8kWh																
Electrical output	3-phase	3-phase	3-phase																
Dimensions (for transport)	12.12m (l) x 2.438m (w) x 2.592m (h) Standard ISO 12mtr Dry Van	12.12m (l) x 2.438m (w) x 2.592m (h) Standard ISO 12mtr Dry Van	12.12m (l) x 2.438m (w) x 2.592m (h) Standard ISO 12mtr Dry Van																
Dry weight (shipping) – subject to final specification	7.8 tonnes	11.8 tonnes	20.1 tonnes																
Footprint (once installed)	17m (l) x 18m (w)	17m (l) x 18m (w)	17m (l) x 18m (w)																
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Battery cells	Solapac PowerStore 40-60		Solapac PowerStore 20-100
	Storage Capacity	60kWh	100kWh
Max Depth of Discharge (DoD)	90%	90%	
Energy @ 80% DoD	48kWh	80kWh	
Energy @ 90% DoD	54kWh	90kWh	
Technology	LiFePO4 (Lithium Ion Phosphate)	LiFePO4 (Lithium Ion Phosphate)	
Current Capacity (Ah)	100	200	
Max & Cont Charge Current (A)	100	220	
Max & Cont. Charge Power (kW)	60kW	117/112kW	
Max / Cont. Discharge Current (A)	150/100	220	
Max / Cont. Discharge Power (kW)	92/60	117/112	
Nominal Voltage (V)	614V	512V	
Continuous Discharge Rate	40kW	112kW	
Maximum Discharge Rate (5mins)	50kW	117kW	
Surge Discharge Rate (15 secs)	50kW	123kW	
Maximum Charge Rate (5mins)	40kW	112kW	
Service Life	>16 years (>5,500 Cycles) @ 80% DOD >20 years (>7,500 Cycles) @ 50% DOD		
Protection	Shunt Trip Circuit Breaker Can be tripped by BMS if critical fault Manual Reset / Overcurrent / Cell under & over voltage / temperature / weak cell detection / minimum SOC control		
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