



Empowering Your Business with Remote Sustainable Power Solutions

GPT Renewable Hybrid Solution
– Bridge Consult, DRC

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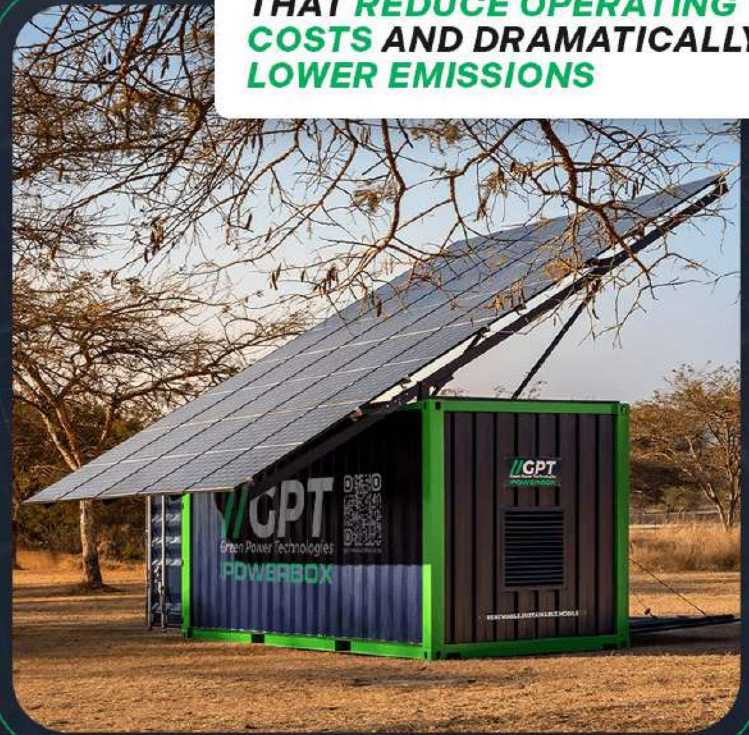
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Our process

Why choose us?



**REMOTE POWER SOLUTIONS
THAT **REDUCE OPERATING
COSTS** AND **DRAMATICALLY
LOWER EMISSIONS****



Example 1: Our Mobile Power Solutions An Industrial Client

The Problem

Our client relies on a 100 kVA diesel generator to power this remote site—an expensive and fuel-intensive solution. They need a dependable, cost-effective energy source that also aligns with their corporate sustainability goals by reducing environmental impact.

GPT Site Solar Lighting

The Site Solar Lighting unit is a solar-powered LED tower providing 2000 sqm of illumination with zero emissions, 8.5m height, 340° rotation, and remote management, perfect for sustainable site lighting.

The Voltbox

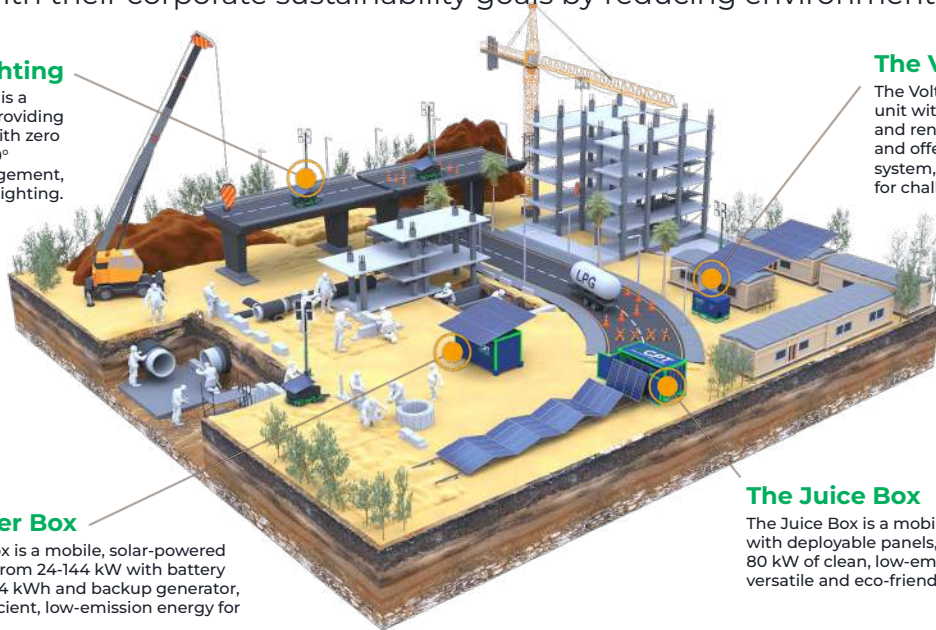
The VoltBox is a rugged, hybrid power unit with 30-45 kVA capacity. It is utility and renewable power integration ready and offers an advanced battery storage system, providing efficient, clean energy for challenging locations..

The Power Box

The Power Box is a mobile, solar-powered unit ranging from 24-144 kW with battery storage 53-424 kWh and backup generator, providing efficient, low-emission energy for remote sites.

The Juice Box

The Juice Box is a mobile solar generator with deployable panels, producing 50 - 80 kW of clean, low-emission power for versatile and eco-friendly energy needs.



Example 2: Our Microgrid Solutions

Powering hospitals & communities

The

The hospital relies on 2 x 500 kVA (combined 1 MVA) diesel generators to provide critical healthcare services to the community — an expensive and fuel-intensive solution. We offer a reliable and cost-effective, hybrid renewable power source that not only delivers clean and stable energy but also aligns with their social-economic and global sustainable development goals of community upliftment while reducing environmental impact.

Problem

GPT Site Solar Lighting

Our GPT Solar Site Lighting is an all-in-one, Plug-and-play, reliable and robust solar-powered LED solution that's quick and easy to install and does not require any cabling. From installation to setup takes less than 10 minutes. Perfect for sustainable site lighting.

Limiting Supply to Single End-Users

Load limiting via our smart metering offers a demand-side load management solution that is used to limit the power to individual households when their power demand exceeds the supply, before our microgrid becomes constrained or overloaded.

The Power Box

Our 2 x 500 kW Power Box units are 20-foot containerized, hybrid renewable power stations with integrated modular battery storage systems scalable up to 1290 kWh per unit and integratable with renewable energy sources like solar (PV), wind as well as diesel-powered generators. Thus, providing efficient, low-emission, and clean energy power source for the hospital and the surrounding community.

Solar Arrays

Harness the power of the sun with our 800 kWp ground mounted solar array. Optimally positioned to maximize sunlight exposure. They form the sustainable backbone of our microgrid solution, providing clean, renewable energy to the hospital and community.

Backup Diesel Generator

The existing diesel generators are utilized only when there is insufficient solar (PV) production, when the batteries have reached critically low levels, or if the load has increased above our design parameters.

Transformer Room

Bridging the gap between renewable energy and community accessibility. Our transformer & Smart metering room intelligently measures and regulates the excess energy being transferred onto the existing electrical distribution network. energy consumption Community members can take these battery pods home to power lights, charge devices, and more, bringing clean energy directly into their living spaces.



The Example 3 (Remote Power) A Mining Camp Client

The

Our client relied on a single 500 kW diesel generator to power a remote mining camp—costly, fuel-intensive, and maintenance-heavy. GPT integrated 3 x Power Hubs (total 750 kW / 3.87 MWh) with 10 x Juice Boxes (500 kWp) so solar (PV) meets most daytime demand and charges the batteries (BESS), which covers evenings and peak loads. PV-first + BESS dispatch slashes generator run hours, cutting diesel use and O&M while improving resilience (N-1 redundancy) and enabling scalable growth.

Problem

GPT Site Solar Lighting

The **Site Solar Lighting** unit features a compact, trailer-mounted solar system with 4x60 W + 2x200 W (site specific) LED floodlights for powerful, wide-area illumination across expansive or off-grid sites.

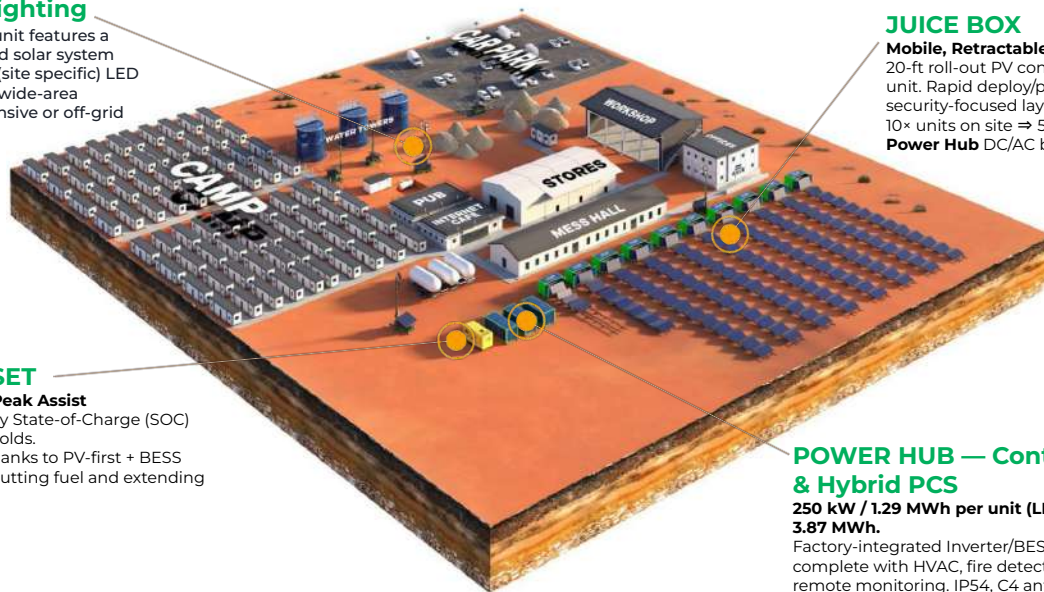
JUICE BOX

Mobile, Retractable Solar PV
20-ft roll-out PV container, ≤ 50 kWp per unit. Rapid deploy/pack-down; security-focused layout for remote camps. 10x units on site $\Rightarrow$ 500 kWp feeding the **Power Hub** DC/AC bus.

DIESEL GENSET

Kept as Backup & Peak Assist

Auto-start on Battery State-of-Charge (SOC) or Peak Load thresholds.
Runs fewer hours thanks to PV-first + BESS (backup) dispatch, cutting fuel and extending service intervals.



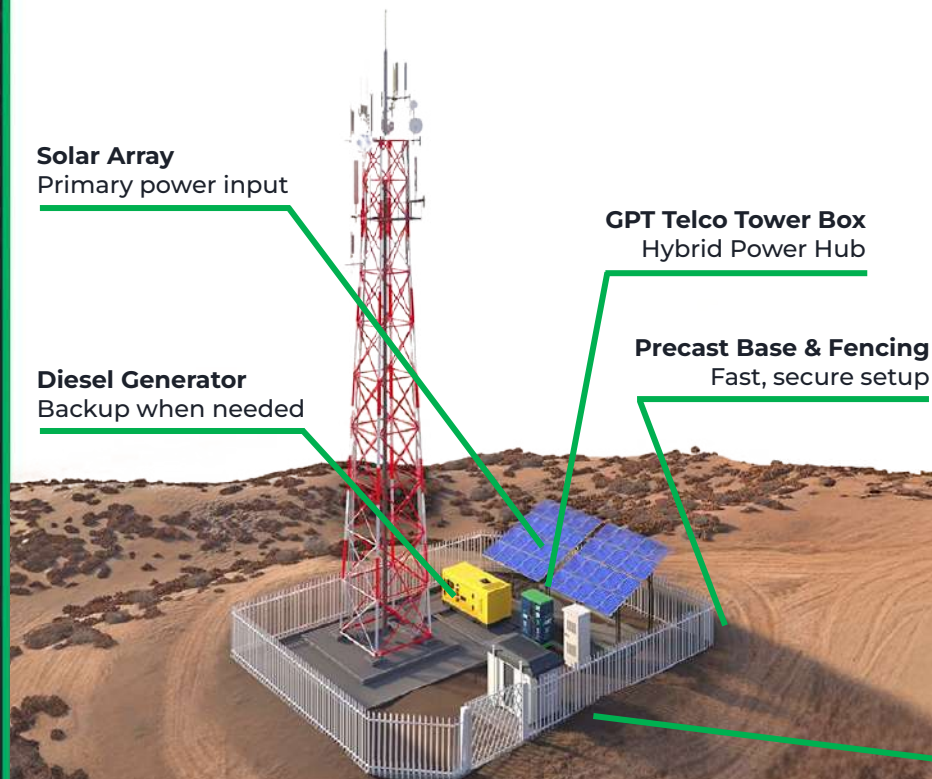
POWER HUB — Containerized BESS & Hybrid PCS

250 kW / 1.29 MWh per unit (LFP). 3x units $\Rightarrow$ 750 kW / 3.87 MWh.

Factory-integrated Inverter/BESS Hybrid Solution complete with HVAC, fire detection/suppression, and remote monitoring. IP54, C4 anti-corrosion; -20 °C to 50 °C. Parallel-ready for future growth.

Example 4: Our Telco Solutions

Telco Towerbox Solution



How It Works

1 Solar First

Solar PV provides daytime power and charges the batteries.

2 Smart Discharge

Battery storage runs the load through the night.

3 Diesel Backup

Generator automatically starts if solar and battery are insufficient.

4 Cloudlink EMS

AI-powered energy management predicts failures, monitors performance.

Our Solutions

The Power Box

Key Product Features

Hybrid Energy Sources

Solar PV Integration: Supports up to 100kWp (or 192 x 550Wp modules).

Battery Storage: Features high-capacity LiPO4 batteries from 61.6kWh - 250kWh. (Larger storage capabilities available).

Diesel Generator Backup: plug-and-play diesel generator compatibility and integration.

Utility Grid: Seamlessly integrates with a Utility power source.

Advanced Safety Features & Add-ons

- 24/7 Security Monitoring with AI Cameras.
- Offers an enhanced enclosure via reinforced multi-layer steel and fibre cement compound.
- Intrusion detection system integrated with high-decibel siren and teargas deployment.
- Magnetic Lockable Doors.
- Geofencing with remote monitoring.

Reliable Backup

Generator kicks in only when the battery drops below 20%.

Quiet Operation

Our Power Box is designed to attenuate the sound of the diesel generator to a level of 70-75 decibels (dB).

Remote Monitoring

Real-time power monitoring and control through 4G/5G/Starlink, allowing easy management even in isolated locations.

App Management Software

Real-time tracking of diesel, battery, and solar performance for seamless, optimized energy control.

Renewable Energy Source

Harnessing solar energy through PV panels to charge the batteries and supply the load, ensuring a steady and reliable power supply.

Plug & Play

Easily connect to multiple outlets powered by renewable energy sources.

Load Management System

Dynamic performance tracking, balancing and load distribution between solar generation, battery system and diesel generator to optimise energy efficiency between power sources.

Mobile & Containerised Design

Designed for ease of transport & rapid setup to minimise operational delays.



Our Solutions

The Juice Box Features

Meet the Juice Box: A 20' mobile solar powerhouse delivering up to 50 kW of clean energy, portable, efficient, and ready to power any site.

High Solar Capacity

Supports up to 270 m² of solar panels, delivering 50 kW power output for diverse energy needs

Eco-friendly Power Solution

Offers clean, low-emission energy with a mobile solar generator—ideal for reducing carbon footprint and diesel reliance

Efficient & Portable Design

Compact 20' mobile solar container, built for easy transport and rapid deployment on any level surface



Scaleable & Flexible Design

Designed to work seamlessly with VoltBox or PowerBox solutions for scalable, hybrid power setups

Built For Tough Environments

IP65-rated for weather resistance and durability, ensuring performance in challenging conditions

“Ready to power your site with cleaner, more reliable energy? Contact us to see how the Juice Box can fit your needs.”

The Power Pod

The Power Pod Features

Empower your remote operations with the Power Pod —the ultimate scalable, C&I hybrid power solution delivering efficient, reliable, and sustainable energy wherever you need it.

“Ready to power your site with cleaner, more reliable energy? Contact us to see how the **Power Pod** can fit your needs.”

Eco-Friendly Operation

Reduces carbon footprint through integration with Solar (PV), ESS, and diesel sources, providing an environmentally responsible energy choice

Advanced Battery Life

Equipped with high-efficiency, modular LiFePO4 batteries providing up to 10,000 cycles. Incorporates active cell balancing, ensuring long-term, stable energy storage.

Intelligent Fire Suppression & Detection System

The Power Block features an advanced **fire suppression system** to extinguish any battery related fire. Fully equipped with **smoke detectors**, and an **intrusion alarm** providing peace of mind and protection.

Scalable & Flexible Power

150kW, transformer-integrated PCS with scalable battery capacity up to 645 kWh to meet your growing energy needs, adaptable for various project requirements.

Rugged & Durable Design

Built for tough conditions with an IP55, C4 anti-corrosion grade enclosure, making it suitable for outdoor installations or challenging environments. Operation Temperature Range of -20~50°C.

Remote Monitoring

Real-time power monitoring and control through 4G/5G/Starlink, allowing easy management even in isolated locations



The Power Hub

The Power Hub Features

Empower your remote operations with the Power Hub—the ultimate scalable, Micro-Grid power solution delivering efficient, reliable, and sustainable energy wherever you need it.



Integrated Industrial Air Conditioning System

Maintains optimal operating temperatures for the storage system, thereby preserving the lifespan and efficiency of the battery modules.

Off Grid, On Grid & Solar Ready

The Power Hub can operate as a grid integrated or islanded renewable power station where each unit comes equipped with **800 kWp Solar** (PV) input capabilities.

Scalable Battery Storage System

The Power Hub features a scalable, modular battery energy storage system, offering **10,000 cycle** life and battery storage ranges from **215 - 1290 kWh** / Hub.

Industrial Inverter System

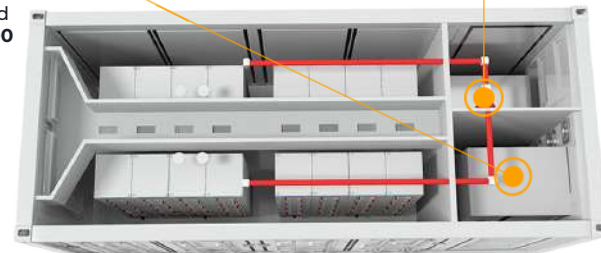
Ensures efficient power conversion and power distribution, critical for large-scale industrial applications. System Ranges from **100 - 500 kW** / Hub. Up to **4 units** can be paralleled to create a system size of up to **2000 MW**.

Fire Suppression, Smoke & Intrusion Detection

The Power Hub features an advanced **fire suppression system** to extinguish any battery related fire. It also comes equipped with **smoke detectors**, and an **intrusion alarm** providing peace of mind and protection.

Remote Monitoring and Technical Support

The Power Hub offers **remote monitoring**, management and technical support, enhancing system reliability through **proactive maintenance** and **performance monitoring**.



“Ready to power your site with cleaner, more reliable energy? Contact us to see how the **Power Hub** can fit your needs.”

Our Telco Solutions

The Telco Tower Box

Key Product Features

System Scalability

The Tower Box solution is capable of handling load demands from 5kVA up to 60kVA, making it versatile for a range of site sizes and power requirements.

Diesel Generator Integration

Our Telco Tower Box unit is capable of integrating seamlessly with existing diesel generators and provides a comprehensive power management system that enhances reliability and efficiency.

Lithium-Ion Fire Suppression System

Incorporates an advanced fire suppression system designed to prevent thermal runaway by rapidly cooling the batteries to below 80°C during battery fault conditions through targeted cooling isolating the risks and maintaining operational safety.



Battery Capabilities

Our modular, LiFePO4 integrated battery system operates at 51.2 V and can be scaled from 10 – 205 kWh to meet extended autonomy requirements, ensuring telecommunications services remain uninterrupted. The battery design life is 10 years i.e., more than 6000 cycles (@80% DOD).

Battery Management System

High performance, built-in, smart battery management system for intelligent battery charging and discharging management, battery cell protection and battery performance analytics. Battery Tampering Disablement if removed / tampered.

Load Management System

Balances solar, battery and generator inputs to ensure uninterrupted power while reducing diesel consumption.

Dynamic Remote Monitoring Software

Our remote monitoring software allow operators to have full visibility and control over multiple tower sites from a central location. This software facilitates real-time monitoring of energy consumption - and generation management enhancing operational reliability and proactive maintenance.

Our Solutions

The Volt Box

Key Product Features

Empower your remote operations with VoltBox—the ultimate scalable, off-grid power solution delivering efficient, reliable, and sustainable energy wherever you need it.

Eco-Friendly Operation

Reduces carbon footprint through integration with solar, wind, and diesel sources, providing an environmentally responsible energy choice.

Rugged & Durable Design

Built for tough conditions with an IP65 rating and hardened enclosure making it ideal for remote or challenging environments.

Instant Deployment

Quick, plug-and-play setup minimizes downtime, giving you immediate power on-site.



Scalable & Flexible Power

Available in 50, and 100 kW models, VoltBox expands to meet your growing energy needs, adaptable for various project sizes.

Advanced Battery Life

Equipped with high-efficiency LiFePO₄ batteries that last up to 6,000 cycles, ensuring long-term, uninterrupted energy. Scalable up to 215 kWh.



Remote Monitoring

Real-time power monitoring and control through 4G/5G, allowing easy management even in isolated locations.

Site Solar Trailer

The Site Solar Trailer Features

Illuminate Your Site with Silent, Solar-Powered Efficiency

“Ready to light up your site with cleaner, more reliable energy solutions? Contact us to see how our site solar lighting can fit your needs.”

High-Performance LED Lighting

Equipped with 4×60W and 2×200W LED floodlights, the trailer delivers broad, high-intensity illumination, ideal for large-scale operations and remote environments.

Self-Sufficient Solar Power

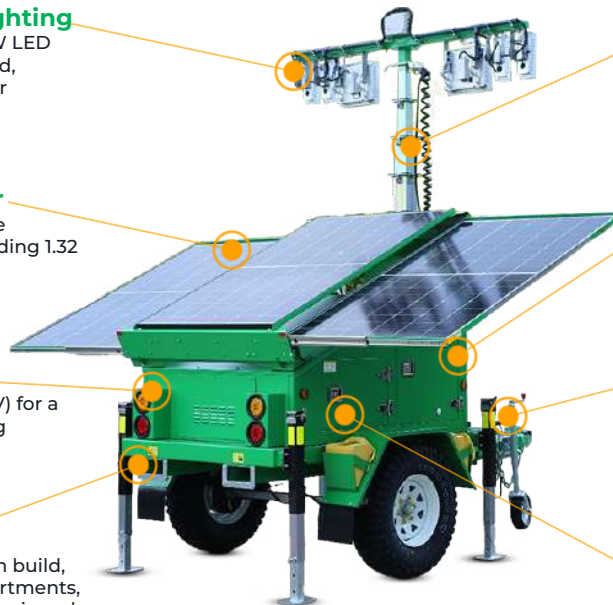
Integrated with 3×440W adjustable monocrystalline solar panels, providing 1.32 kW of renewable input to support night-long lighting without fuel or emissions.

Durable Battery Storage

Includes 6×150Ah Gel batteries (24V) for a total of 10.8 kWh storage, delivering reliable, off-grid performance for continuous night-time operation.

Built for Rugged Use

With a weatherproof, anti-corrosion build, insulated housing, lockable compartments, and generator-ready features, it's designed for durability in harsh field conditions.



Manual 6m Telescopic Mast

A 20-foot manually operated mast with a robust lifting system allows optimal light placement in a variety of environments and terrains.

Smart Monitoring & Control

Integrated Victron SmartSolar controller and monitoring system with display interface ensure precise energy management and ease of use.

Fleet-Friendly & Portable

Fleet-ready design with foldable tongue and 4-point stabilisation. Four units fit per truck bed, making logistics and redeployment highly efficient.

Plug-and-Play Deployment

Factory-tested and pre-configured for rapid deployment. Simple plug-and-play functionality ensures minimal site setup time with zero emissions and no noise.

Our Renewable Power Solutions

Technical Approach & Design Considerations

Scope of Supply

Single Inverter-Battery Cabinet Scope

Power Box Component / Feature	Included Scope
Single Cabinet Enclosure	Secure integrated cabinet designed for reliance applications and outdoor deployment environments.
Integrated Hybrid Power System	Integrated inverter/charger, LFP battery storage, EMS/BMS, AC/DC protection and monitoring systems.
LFP battery bank	30 kWh battery storage system.
Victron-based inverter system	1 x MultiPlus-II inverter/charger
Solar charge control	2 x MPPT RS 250/100 charge controllers for DC-coupled PV input.
EMS/RMS	Energy management and remote monitoring system for alarms, battery SOC, runtime events and system performance visibility.
Fire detection / suppression	Included as preliminary design allowance, subject to final fire system specification.
Generator Integration	Generator-ready architecture for extended outage support and battery recharge functionality.

Renewable Energy for Your Business

Our Process

At Green Power Technologies, we handle every step of your renewable energy project, from initial consultation to long-term maintenance. We provide tailored solutions designed to maximise energy efficiency, reduce costs, and help your business go green with confidence.



Step 1

Consultation

Our experts assess your energy needs and design a customised plan for sustainable energy solutions. Start your journey and contact us today!



Step 2

Design

We deliver bespoke designs that align with your commercial needs—scalable, efficient, and built for long-term savings.



Step 3

Build

Our skilled team ensures seamless construction with minimal disruption, adhering to the highest safety and quality standards.



Step 4

Install

Our certified technicians guarantee a flawless installation that delivers immediate energy savings.



Step 5

Maintain

We offer comprehensive maintenance services to keep your system running efficiently, ensuring long-term reliability and peace of mind.

Next Steps

Step-by-Step Approach to Sustainable Power Solutions



STEP 1

Load Profile Analysis

Assess the client's energy consumption to establish a tailored baseline.



STEP 2

Deploy Energy Meter Logger

Install a logger on-site to gather precise real-time energy data.



STEP 3

Custom System Design

Develop a bespoke energy solution based on specific usage patterns.



STEP 4

Commercial Proposal

Present a detailed proposal outlining costs, savings, and environmental impact.



STEP 5

Client Approval

Finalise and secure approval to transition into the implementation phase.

Who we're working with **Our Partnerships**



Locations

Powering Communities, Expanding Impact





Thank You for Your Time

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