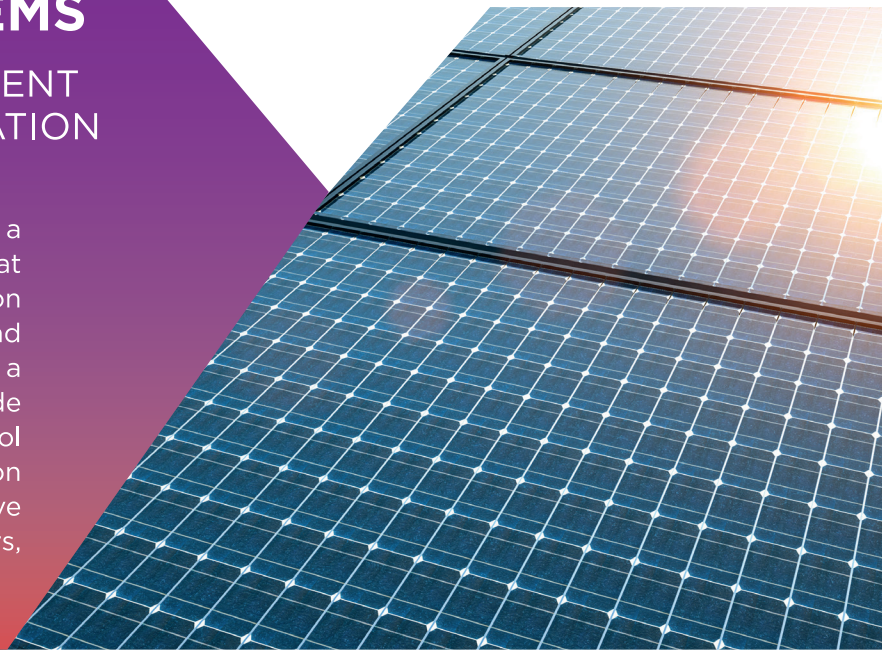


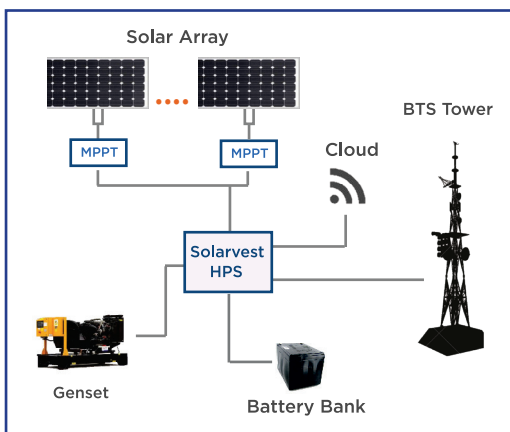
# HYBRID POWER SYSTEMS

## INTELLIGENT POWER MANAGEMENT FOR BASE TRANSCIVER STATION (BTS) SITES

Solarvest's Hybrid Power Systems (HPS) is a flexible, cost effective power control system that minimises the number of cabinets required on site, simplifies maintenance complexity and interconnects with a wide range of equipment in a mixed vendor network. Solarvest's HPS is made up of a common platform of power control modules that support a variety of base station power loads and control a comprehensive selection of power sources including generators, solar panels or wind energy.



## SOLUTION COMPONENTS



	SOLARVEST HPS	SOLAR ARRAY
SYSTEM	Smart Hybrid Systems Hub	Solar Panels
	System Controllers	Mounting System
	Sensors (as required)	MPPT
	Rectifier	Solar Controller
	Inverter	<b>GENSET</b>
	Power Distributor	Diesel Generator
	Surge Protection	Fuel Tank
	Indoor/Outdoor Cabinet	<b>BATTERY BANK</b>
	Redundancy Switch	Batteries
	Remote Communication	Battery Management System

## ADVANTAGES & CHALLENGES

PARAMETERS	ADVANTAGES	CHALLENGES
EMISSIONS	Zero	None
CAPEX	Solar prices dropped significantly over the last 5 years	Requires high storage capacity with batteries creating more cost.
OPEX	Dramatically reduced fuel requirement	Regular Cleaning required.
SUNSHINE AVAILABILITY	Average 1500Wh/m <sup>2</sup> Annually	Monsoon seasons and mountainous rainforest locations.
SOLUTION CONFIGURATIONS	Easily integrated hybrid solution.	Intermittent sunshine availability requires equipment automation to optimise solar photovoltaic usage. A higher capacity solution leads to a higher CAPEX investment.
STORAGE	Load balancing and trickle charging.	More batteries needed in low solar capacity sites.

## FLEXIBLE AND EXPANDABLE

Whether AC or DC power requirements Solarvest HPS can be easily configured to support different equipment and configurations, from 100% renewable energy solutions, through to support for smaller or larger load sizes, to 100% grid-powered monitoring-only solutions. So customized to fit the power requirements of the client. This all helps reduce the need for refueling of ICE's plus the maintenance costs due to the simplicity of the infrastructure. Quick installation enables us to get the system up and running within two months. Remote/local system configuration and status monitoring for historical and operational data enables us to improve the system as time goes therefore maximising the effectiveness of the system for each site.