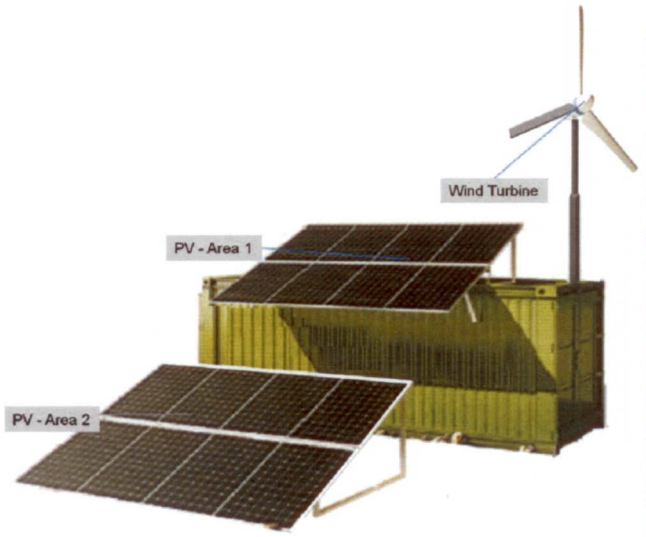
Energy Island Container ENIC-1C

High sophisticated hybrid technology for production of electricity from renewable energy** (solar, wind) **and for powering of chosen application.

Applications:

***Container integrated pre-assembled solution for quick electrification of Off-Grid Areas** (rural, mountain, isolated communities, ... etc.)*



+	powering of isolated communities
+	continuous energy for small hospitalls
+	powering of communication station
+	pumping and treatment of well water
+	public lighting
+	powering of refrigeration units
+	powering of construction machinery in remote sites
+	powering of small irrigation pumps

Main Features:

+	Plug and play system with pre-assembled appl.	+	System management with the SI5048 SMA inverter
+	Gridable systems (with other ENICs systems)	+	Optimal battery managements based on the SOC
+	Realiable system (SMA - Master-Slave inverters)	+	Loads managements based on the SOC and power
+	High efficiency monocrystale PV modules (250 W)	+	Optimal energy consumtion
+	Back-up silent diesel-motor generator (5 kW)	+	Ability for local and remote communication
+	Wind turbine with SMA invertor - up to 2,5 kW	+	System fully controlled and on site programmable
+	Hoppecke realiable batteries (store of ren.energy)	+	Small water turbine connectivity to AC line (option)
+	Optimal use of locally renewable sources	+	Quick and easy on site instalation

Ambient Conditions:

Wind speed limit	(km/h)	95
Maximum wind speed for the standard working of wind turbine	(km/h)	50
Internal working temperature range	(°C)	from 0 °C to + 40°C
External - enviromental working temperature range	(°C)	from -25 °C to + 50°C

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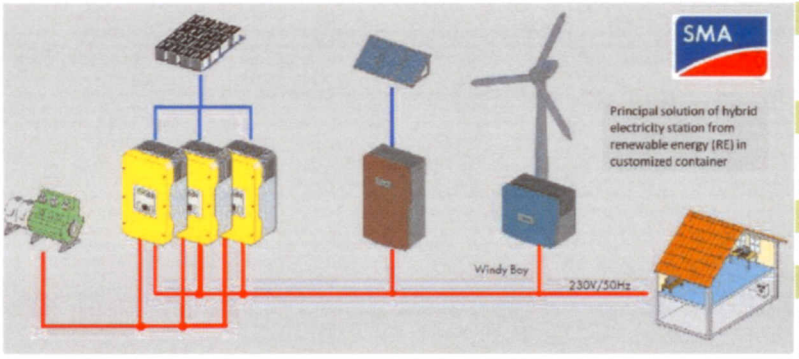

❑ Plug and play system
Easy and quick instalation does not require skilled manpower

❑ Portability
ENIC-1C can be shipped and transported everywhere as a standard 20 ft container

❑ Minimum maintenance cost
Minimum level of maintenance

❑ Scalable - Gridable system
Can be connected to the others ENIC-1C to make large scale system

Other technical parameters:

Container system layout	Quantity of containers	(pcs)	1
	Container dimension (L x W x H)	(m x m xm)	ISO 1C (20ft)
	Container weight (fully equipped)	(t)	~ 6
	Full area for PV modules instalation (24 pcs of 250 W)	(m^2)	38
	Wind turbine adjustable height (max H)	(m)	9
	Time requested on-site instalation and start-up	(days)	1
	Certification		CE

System management, battery and loads management	Nominal AC power at 25° C / 45°C	(W)	5000 / 4000
	Available pick power at 25°C during 30 min/1 min/3s	(W)	6500 / 8400 / 12000
	Optimized power managment in system, request and regulation energy sources, control all systems components		Frequency Shift Power Control, Master-slave communication and control of other inverters
	Optimized load managment (connect and disconnet of load at high consumption, overload capability)		Adaptive on the SOC, power, loads
	Optimized battery managment (efficient battery charge and discharge, battery management impact - prolonging service and cycles life)		Adaptive on the SOC, power, loads
	Minimum available energy (in absence of renewable energy)	(days)	contin. from diesel-motor generator 1

Generators and energy storage	Electric configuration	-	AC Single - Phase System 230 V
	Nominal frequency	(Hz)	50 / 60 ; appl. (45 Hz - 65 Hz)
	Photovoltaic nominal power at full PV area (Area 1 + Area2)	(W)	6000
	Wind turbine nominal power	(W)	2500
	Voltage of system - Battery storage system	(V)	48
	Type of battery: Hoppecke solar battery (2V, 620 Ah)	(pcs)	24 OPzS (OPzV) solar.power 620 GUG
	Nominal kapacity of energy battery system	(kWh)	30
	Maximum DoD of batteries at 45°C for 2000 life cycles	(%)	30

Accesories	Increase of 1 day of available energy (in absence of renewable generation)	optional (extra string of 24 pcs of batteries)
	Special customers configurations of already pre-assembled system	optional
	Device for container unloading without crane	optional
	Working tools for on-site instalation	optional
	If any special tools for back-up generator is needed	optional