



a KAD3GROUP Company



# H<sup>⚡</sup>REI

NEW ENERGY GENERATOR

## Efficient and Smart Generator for Grid-connected and Off-grid applications



UP TO 90%  
CONSUMPTION  
SAVING



24H POWER  
AVAILABILITY



OPTIMIZED  
MANAGEMENT



TRANSITION FROM  
NATIONAL GRID TO BATTERIES  
WITH NO INTERRUPTION



VOLTAGE  
REGULATOR



MODULAR  
CASES



SELF-LEARNING  
SYSTEM



SIMULTANEOUS USE  
OF RENEWABLE ENERGY  
SOURCES





Fuel Cells



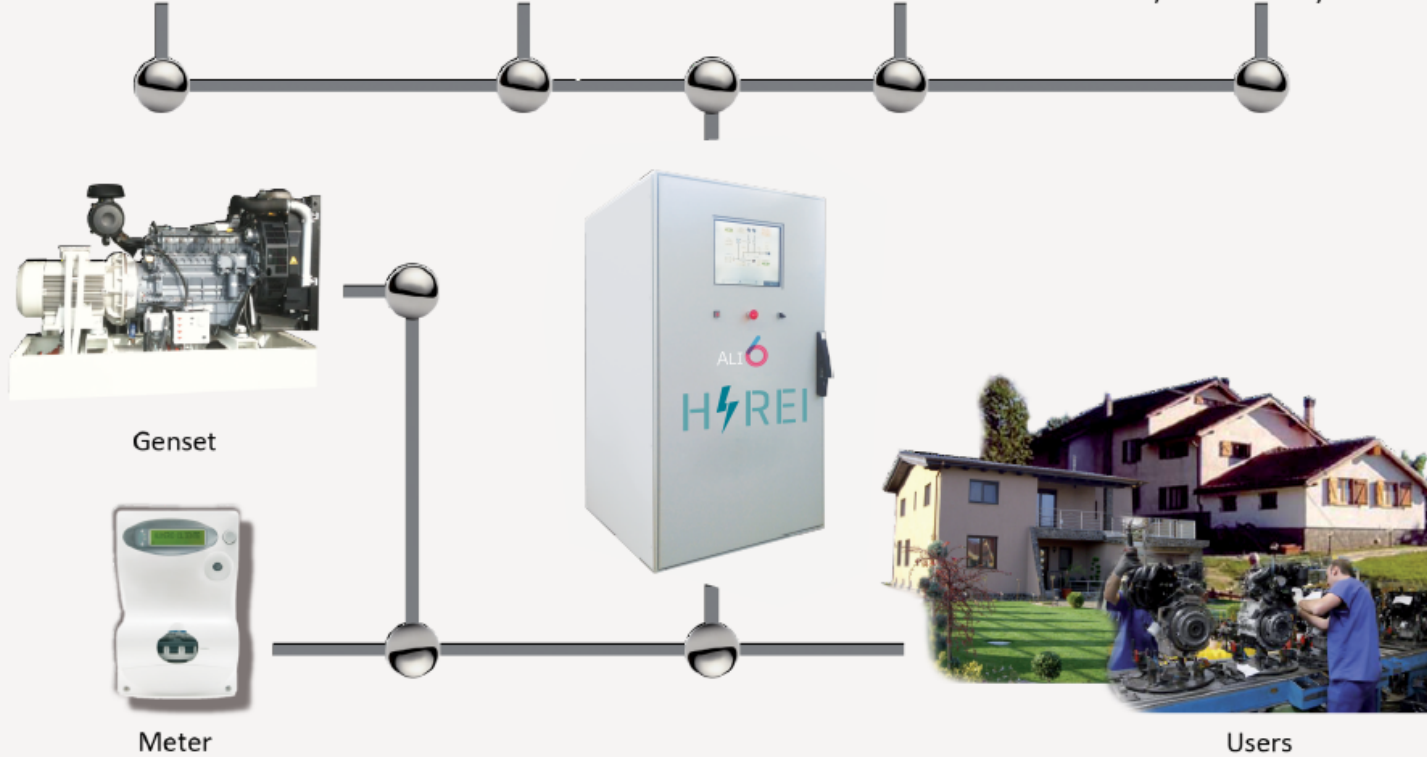
Photovoltaic Modules



Wind Turbine



Hydroelectric System



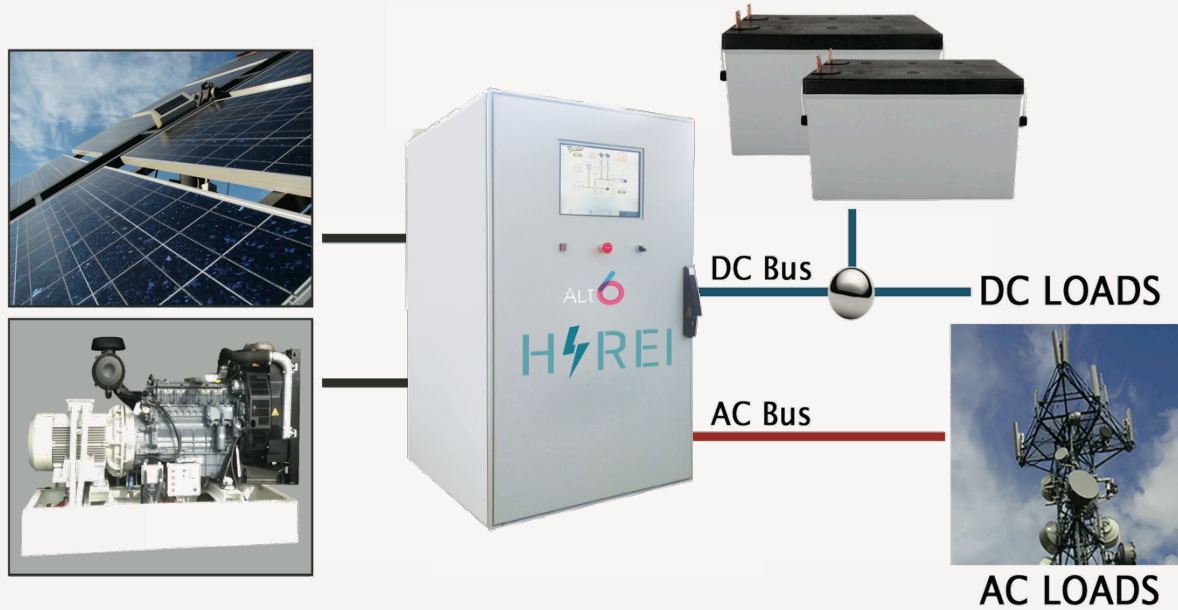
Genset



Meter



Users



# Hyrei

for Telecom Sites

Today's telecommunication network operators are asking for:

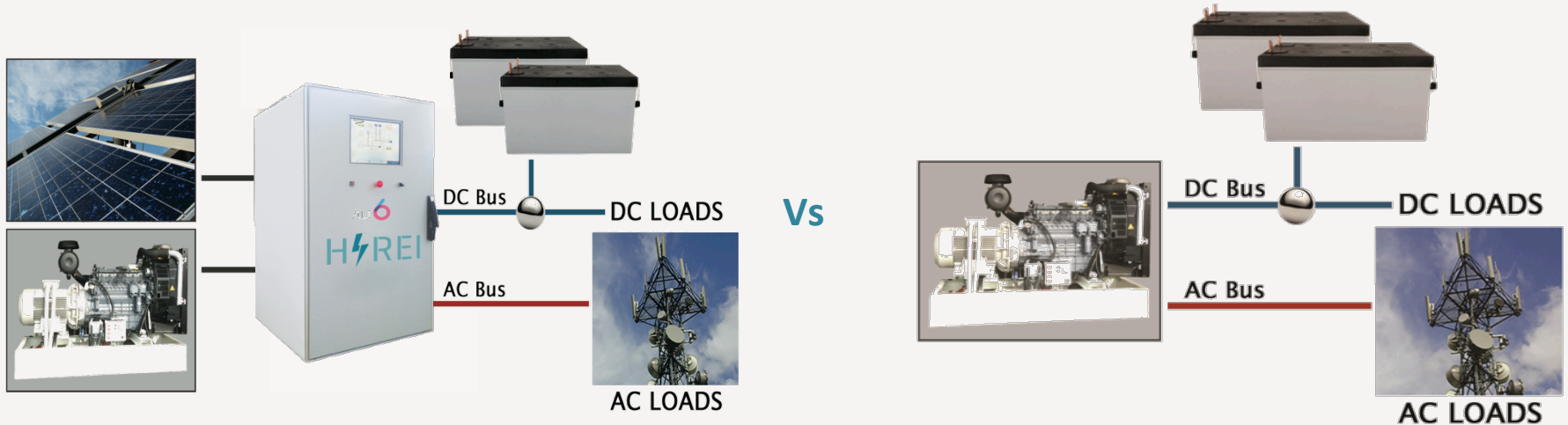
- ✓ *Less fuel consumption.*
- ✓ *Lower operating costs.*
- ✓ *Fewer maintenance trips to the field.*



**COST SAVING** and **EASY TO OPERATE** are the Principles that inspire **HYREI FOR TELECOM SITES**, built as smart and flexible power solution to save CAPEX and OPEX .

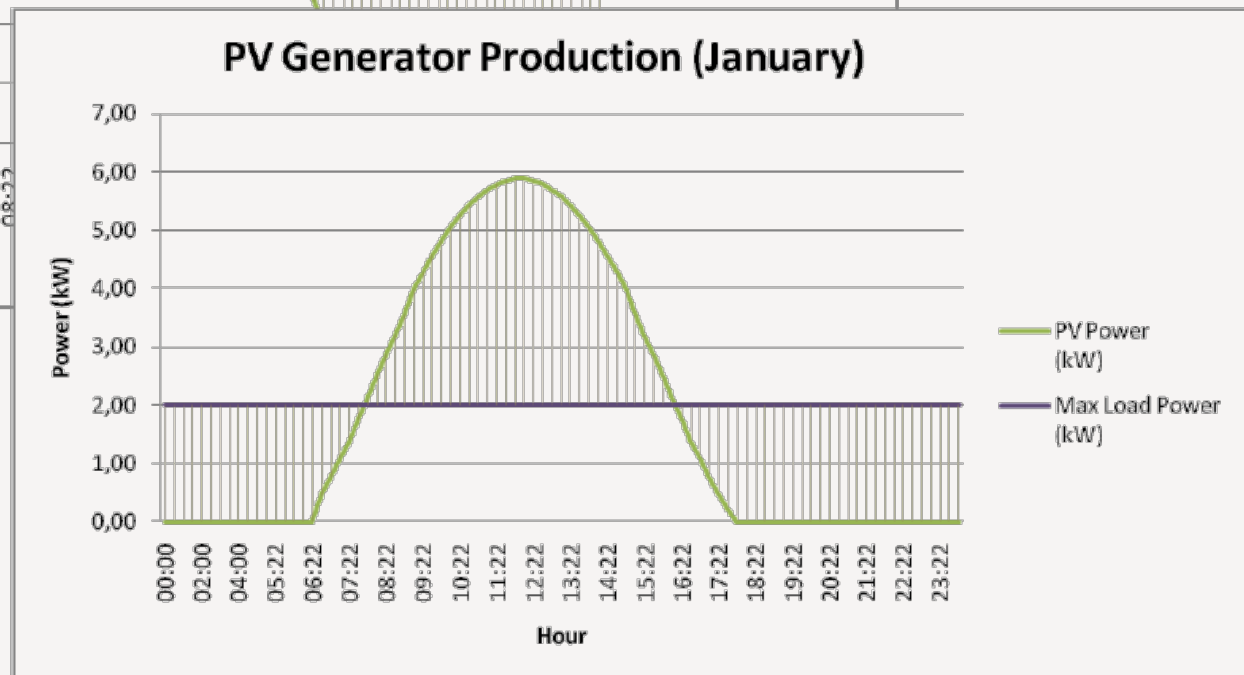
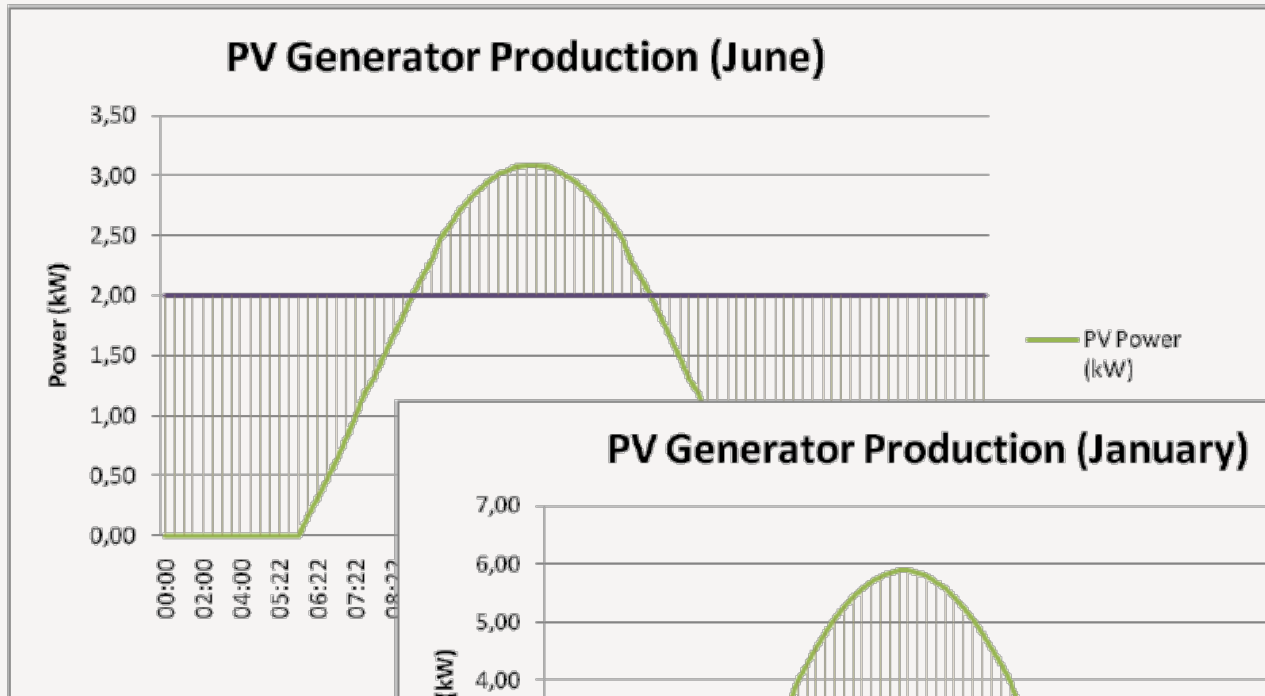
# Hyrei for Telecom Sites

## Comparison

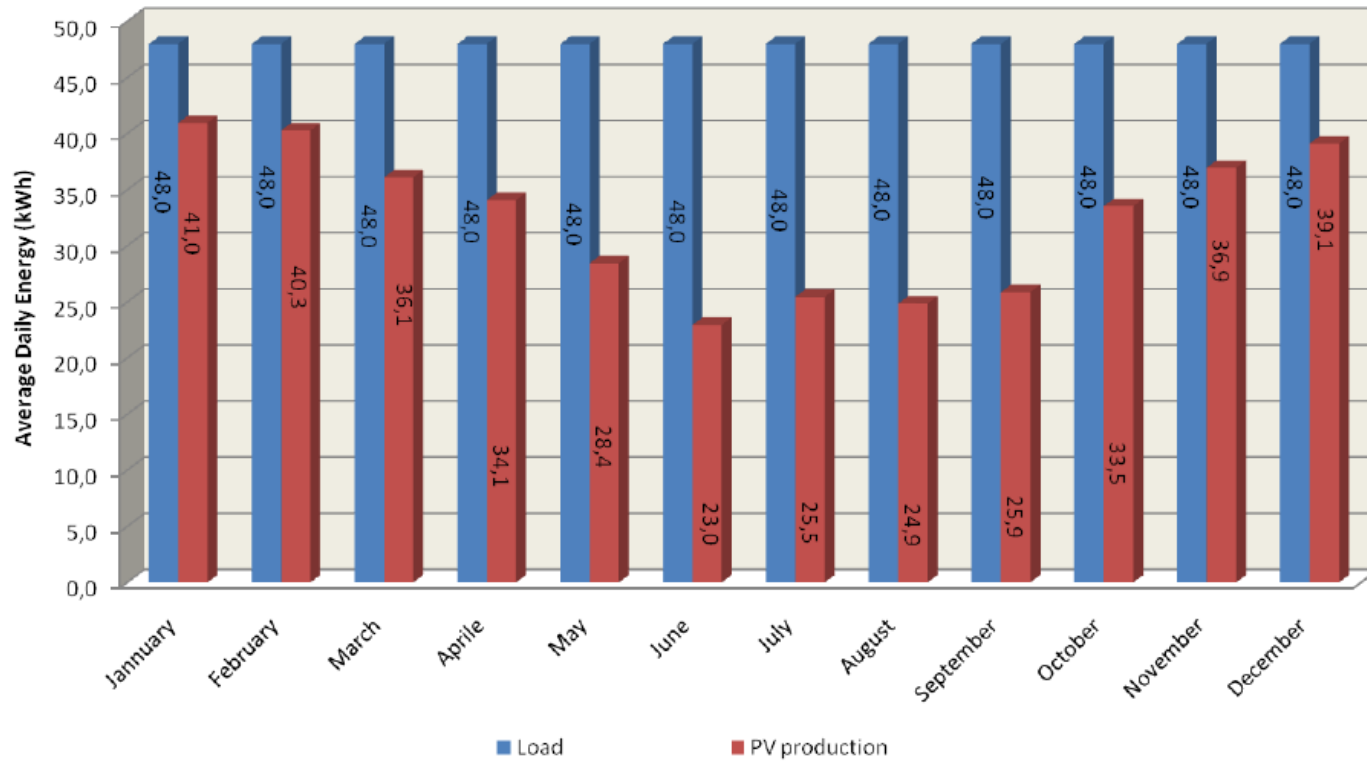


Telecom site: 2 kW  
Hyrei: 3 kVA ( 7 KWp PV System +  
Genset )

Telecom site: 2 kW  
Genset: 10 kVA

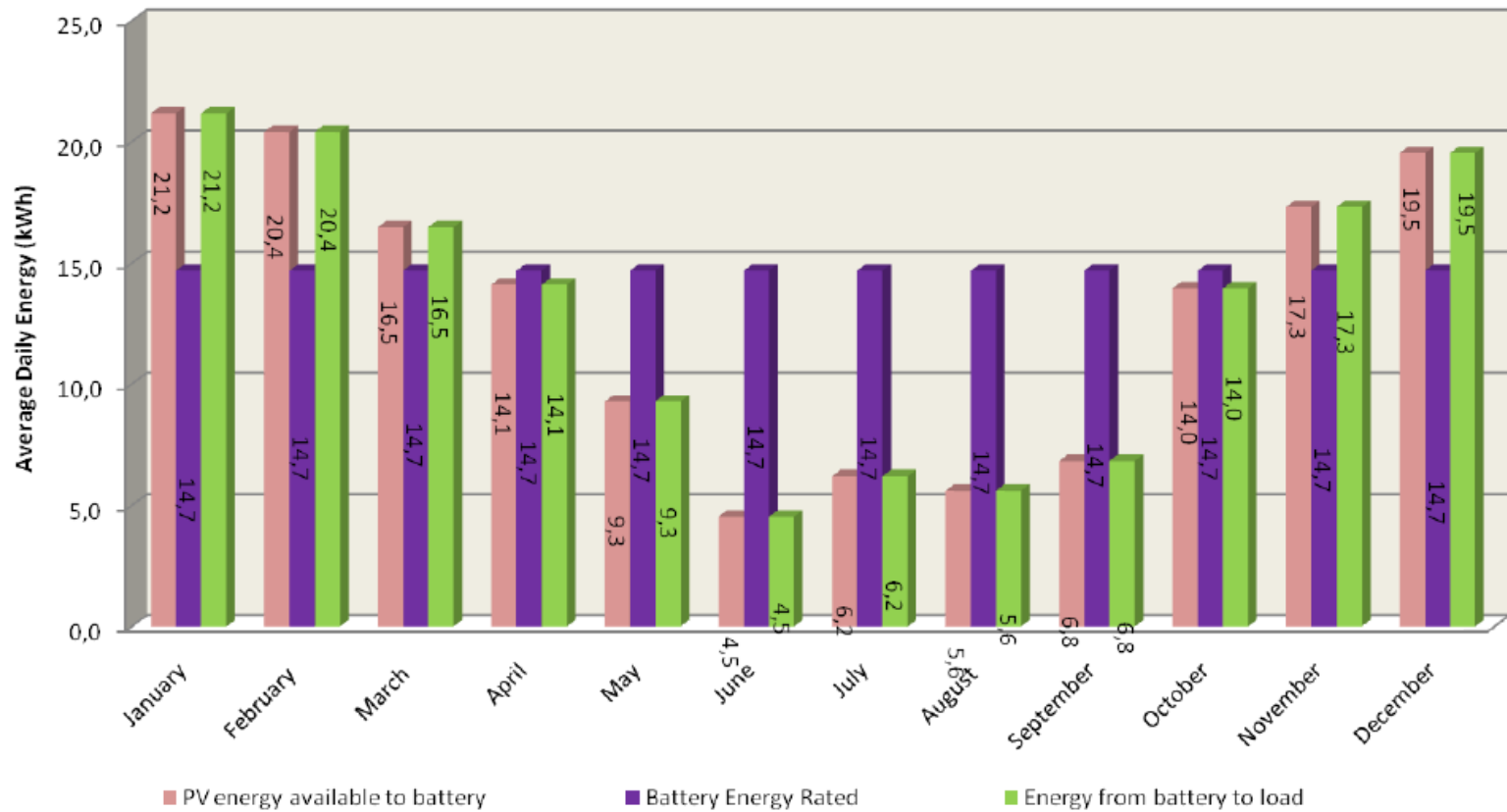


### Load vs PV production

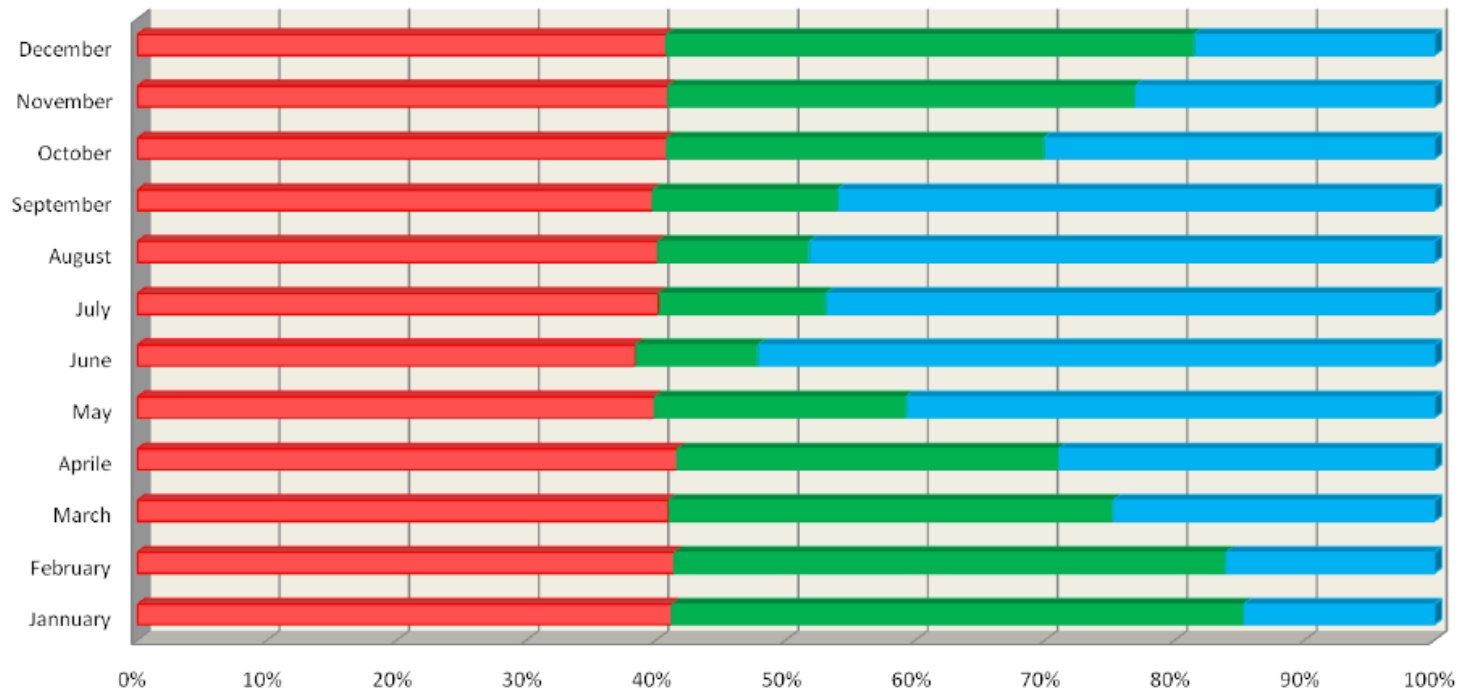




## Battery Daily Average Energy Flow

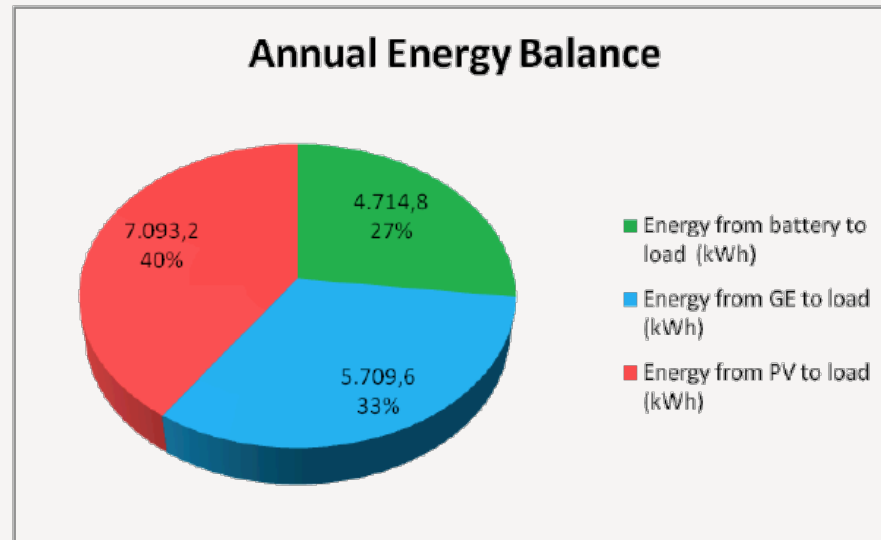


### Daily Average Energy Balance



	January	February	March	Aprile	May	June	July	August	September	October	November	December
■ Energy from PV to load (kWh)	19,8	19,9	19,6	20,0	19,1	18,4	19,3	19,3	19,1	19,6	19,6	19,6
■ Energy from battery to load (kWh)	21,2	20,4	16,5	14,1	9,3	4,5	6,2	5,6	6,8	14,0	17,3	19,5
■ Energy from EG to load (kWh)	7,0	7,7	11,9	13,9	19,5	25,0	22,5	23,1	22,1	14,4	11,1	8,9

Hybrid_Ali6	Total Load (kWh)	PV energy production (kWh)	Energy from battery to load (kWh)	Energy from GE to load (kWh)	Energy from PV to load (kWh)	Diesel consumption (liter)
January	1.487,79	1.269,70	656,67	218,09	613,03	78,51
February	1.343,81	1.127,89	571,60	215,93	556,29	77,73
March	1.487,79	1.119,76	510,63	368,03	609,12	132,49
April	1.439,80	1.022,55	423,29	417,25	599,26	150,21
May	1.487,79	881,79	288,28	606,00	593,51	218,16
June	1.439,80	689,06	135,88	750,74	553,17	270,27
July	1.487,79	789,70	192,36	698,10	597,34	251,31
August	1.487,79	770,73	173,83	717,07	596,90	258,14
September	1.439,80	776,78	204,69	663,02	572,09	238,69
October	1.487,79	1.039,88	432,69	447,91	607,20	161,25
November	1.439,80	1.108,14	519,35	331,66	588,79	119,40
December	1.487,79	1.211,99	605,50	275,80	606,49	99,29
<b>Totale</b>	<b>17.517,57</b>	<b>11.807,95</b>	<b>4.714,77</b>	<b>4.714,77</b>	<b>5.709,62</b>	<b>2.055,46</b>



	Hybrid telecom kit-consumption (liter)	Traditional Diesel Generator - consumption (liter)
January	78,51	535,61
February	77,73	483,77
March	132,49	535,61
April	150,21	518,33
May	218,16	535,61
June	270,27	518,33
July	251,31	535,61
August	258,14	535,61
September	238,69	518,33
October	161,25	535,61
November	119,40	518,33
December	99,29	535,61
<b>Total</b>	<b>2.055,46</b>	<b>6.306,32</b>

Diesel cost= 1,3 \$/liter

**Diesel Consumption Ex-ante:**

$$6.306,32 \times 1.00 = 8.198,21 \text{ \$/year}$$

**Diesel Consumption Ex-post:**

$$2.055,46 \times 1,00 = 2.672,10 \text{ \$/year}$$

**Savings:**

$$6.306,32 - 2.055,46 = 4.250,86 \text{ liter/year}$$

$$8.198,21 - 2.672,10 = 5.526,11 \text{ \$/year}$$

Hybrid telecom System provides energy savings and less maintenance cost . Payback time of Ali6 Hybrid Telecom System is 3-4 years.



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