

Hybrid System Summary



FearTheSkunk

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Site Summary

Site Name			
Location	MWANZA, TANZANIA		
Latitude	2.30 S	Longitude	32.60 E
		Elevation	0 m
Comments	Hydrometeorological Control, Moscow		

Load / System Summary

Design Load	67.05 kWh/d-AC		
Tilt	15 N	Azimuth	0 E
		Tracking	East-West
			85.3%
Hours	338 hrs	Fuel	12,979 Liters
		Cycles	61

System Summary

PV (Module / Array)

Model QPro-G4-265
Rating 265 W / 48.2 kWp
Modules 182
Config 14 S x 13 P
Vmpp 30.75 / 430.5 V
Imp 8.62 / 112.1 A
Voc 38.01 / 532.1 V
Isc 9.23 / 120.0 A

Battery (Unit / Total)

Model
Storage 579.84 kWh
Units 20
Config 20 S x 1 P
VDC 12.0 / 240.0
Amp-hr 2416.0 / 2416.0
Rating 1.5 days

GTInverter

Model String25/3
VAC 240 V
Rating 25 kVA
Quantity 3

Generator

Model
Fuel Diesel
Rating 150 kW
PF 0.90

Battery Inverter

Model BlueStar25/3
VAC 240 V
Rating 25 kVA
Quantity 3

Battery Charger

Rating 25 kW
Efficiency 97.0%

Hybrid Sizing Analysis

	Array Inso	Array	Load	PV Contrib	Gen Load	Runtime	Gen Starts	Fuel Use
Month	kWh/m2/d	Kh/d	Kh/d	%	%	Hours	#	Diesel
Jan	7.50	299.4	270.0	97.1	70	16	1.00	594
Feb	6.03	242.3	276.0	78.5	71	33	6.70	1264
Mar	6.67	266.8	282.0	83.9	71	30	5.64	1142
Apr	6.54	262.1	288.0	81.1	71	33	6.54	1251
May	7.08	282.9	294.0	85.4	71	29	5.31	1108
Jun	7.55	301.6	300.0	88.9	71	25	3.98	951
Jul	7.62	304.2	300.0	89.6	71	24	3.85	937
Aug	7.55	301.2	300.0	88.8	71	25	4.16	973
Sep	6.90	275.6	294.0	83.3	71	31	5.86	1173
Oct	6.70	267.5	288.0	82.6	71	32	6.22	1213
Nov	6.44	258.4	282.0	81.7	71	32	6.22	1211
Dec	6.59	264.4	282.0	83.4	71	30	5.81	1162

Hybrid System Analysis
PV And GensetContr

