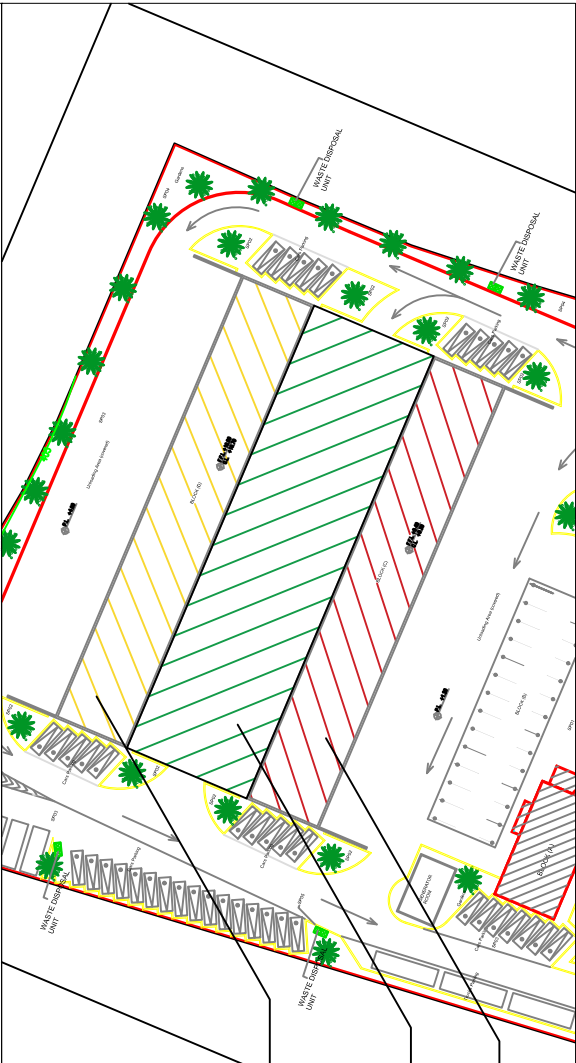


Maximum Allowable Voltage Drop	
Cable	%ΔV
S1	0.50%
S2 & S3	2.00%

All cables must be UV and water resistant. DC cables shall be of the type Cu Rck-0.6/1 kV.

Note1: Additional Type 2 SPDs for the DC strings are required if the distance between the inverters and the PV panels is greater than 10 meters. These SPDs should be installed at a distance less than 10 meters from the PV panels.

SYSTEM DESCRIPTION
<p>THE SYSTEM IS A HYBRID SOLAR SYSTEM DESIGNED TO DECREASE THE UTILIZATION OF DIESEL AND ENERGY FROM THE GRID.</p> <p>MAIN COMPONENTS:</p> <ul style="list-style-type: none"> PV CAPACITY: 200 KWp GRID-TIED INVERTER TOTAL CAPACITY: ~170kW <p>SYSTEM ARCHITECTURE: (GRID CONNECTED) HYBRID SYSTEM</p> <p>NOTE: CONFIGURATION SERVERS TO BE AN EXAMPLE ONLY</p>



Photovoltaic Generator	PV Capacity at STC (Wp) Building D	≥268,000 Wp
	PV Capacity at STC (Wp) Building C	≥57,000 Wp
	PV Capacity at STC (Wp) TSM Roof	≥75,000 Wp
	Total PV Capacity at STC (Wp)	≥200,000 Wp
	Inclination	15° on Flat Roofs and 5° on TSM
	Type of module	Crystalline 72 cells
	Orientation	Roof mounted, D & C: 20°, TSM: 20°
	Standards	EC 61215 edition 2, IEC 61730, IEC 62716, IEC 61701
	Location	Outdoor
	Type	Three phase transformerless
Grid-Tied Inverter	Rated power	Total ≥ 180,000 W
	Number of MPP tracker	≥ 1
	Protection Class	≥ IP65
	Biggest voltage MPP range	150 V - 800 V
	Maximum DC voltage	1,000 V
	Output AC voltage	3 / N / PE 230, 400 V (adjustable)
	Output AC frequency	50 Hz (adjustable)
	Phi cosine	1
	THD	≤ 3%
	Consumption at night	≤ 3 W
	Maximum efficiency	≥ 98 %
	Euroefficiency	≥ 97 %
	Standards	Harmonic Current (IEC 61000-3-2 and / or IEC61000-3-4), IEC 62109-1/2
	Anti-islanding protection	Yes/ VDE 0126-1-1 or similar
	Communication	RS485, ethernet, RS232
PV plant controller & data logger	Additional requirements	Dynamic compensation of reactive power, inverter automatic reconnection conditions, linear output power control from a third device (read and write capabilities), utility-interactive photovoltaic inverter system.
	Permissible grid characteristics (inverter not to be disconnected)	Vp-n = 230 V ±20%
		Vp-p=400 V ± 20%
		Fq = 50 ± 5 Hz
		Fuel reduction device
	Type	Communication
	Inputs	RS485, Ethernet and/or RS232 (compatible with Grid-dependent inverter, existing Genset control Unit, environment sensors and electrical meters)
	Outputs	Meters, sensors, inverters, Genset Control Unit, Grid (consumption)
	Data logger	Inverters, Grid (back-feeding)
		2 years data logging capacity, monthly evaluation report, calculation of indicators and remote monitoring

Roof C, flat roof of approximate area: 590 m2

Roof TSM, sheet metal roof of approximate area: 1500 m2

Roof D, flat roof of approximate area: 750 m2

MODE OF OPERATION	
MODE	POWER
SOURCE	GRID CONNECTED INVERTER
OPERATION	Grid
Mode	Grid
Fuel	Load feeding (normal operation)
Reduction	Injection to the grid if any surplus
	Load feeding according to fuel reduction mode

SERVICE SPECIFICATIONS	
Output performance	Specific Yield
Daily final average production (kWh/day)	1,480 kWh/kwp
Reference annual consumption (kWh/year)	810 kWh/day
Facility characteristics	Estimated solar fraction



DRAWINGS: SYSTEM LAYOUT AND ARCHITECTURE
PROJECT: NABATIVE MARKET FOUNDATION
CLIENT: NABATIVE MUNICIPALITY
PV1B 1,2,1

