**DC Section:**

Measure current, voltage, and calculate the energy stored in the battery (start/end time).  
**Main Parameters to count:**

* Measure Charging Current
* Measure Discharging Current
* Start and end time of each activity
* Measure Voltages of the battery and define reconfigurable LVC (Low Voltage Cut-Off) for the battery, e.g., for a 48V battery, LVC = 46V
* When battery voltages are lower than LVC, turn On the Generator
* Also define HVC (High Voltage Cut-Off). Once battery voltages > HVC, turn Off the Generator
* Display relevant info on the LCD

**AC Section:**

Measure current, voltage (start/end time).  
**Main Parameters to count:**

* Measure each phase Current
* Measure each phase Voltages
* Start and end time of each activity (Generator ON/OFF Time)
* Display relevant info on the LCD

Also, consider fuel consumption activity during the period of Generator On.