



List of the used components

S. No	Components	Model	Specification	Quantity	Image
1.	Voltage sensor	Diy small DC 0-25V	voltage measures: 25V DC	8	
2.	Current sensor	ACS712	Operates at 4.5-5.5V Rated O/p: 20A	8	
3.	Power Sensor	7SEMI INA260	I/p: 3-5V used as bidirectional current	4	
4.	Buck Converter	LM2596	I/P: 4.5-35V O/P: 1.23-30V Switching Frequency: 150KHz	4	
5.	Boost Converter	MT308	Operating frequency: 150KHz	3	
6.	Buck-Boost Converter	LTC3780	Converts DC voltage from 5-32V to regulated output of 1-30V	1	
7.	Arduino	Mega	-	1	
8.	NodeMCU	ESP 32	-	1	
9.	Battery	-	12.8V/12Ah	1	
10.	Solar Panel	-	50W	1	

11.	Load Side Solar Panels	-	10W	2	
12.	Micro Solar Panel	-	3.5W	5	
13.	Rectifier (SMPS)	-	220V AC to 12V DC	1	
14.	Inverter	-	200W	1	
15.	LCD Display	20*4	-	3	
16.	Boost Converter	XL6019	input: 3-30V output: 5-40V Switching frequency: 220kHz		
17.	Jumper Wires	-	-	200	
18.	Buzzer	-	5V	8	
19.	Diode	-	10A	18	
20.	Relay	-	5V	20	

21.	Charging Module	-	5V	3	
22.	DC Motor	-	5V	3	
23.	LED	-	5V	8	
24.	Wind Turbine	-	50W	1	
25.	Anemometer	GM816	-	1	
26.	Light Sensor	BH1750	-	1	
27.	Temperature sensor	DHT11	-	1	
28.	LED	-	8V	3	
29.	Push Button	-	5V	16	
30.	Logical level converter	TXS0108E	-	1	

31.	Buck converter	XL4005	-	1	
32.	Boost converter	-	400W-15A	1	
33.	Small battery	-	3.8-2000mA	3	