Battery Sizing Worksheet

1. Enter your daily amp-hour requirement.
(Divide watts per day by 12, 24, or 48, depending on your system voltage.)
AH/ Day _____

2. Enter the maximum number of consecutive cloudy weather days expected in your area, or the number of days of autonomy you would like your system to support.
_____

3. Multiply the amp-hour requirement by the number of days. This is the amount of amps-hours your system will need to store. AH _____

4. Enter the depth of discharge for the battery you have chosen. This provides a safety factor so that you can avoid over-discharging your battery bank.
50% maximum or 0.5 _____

5. Divide line 3 by line 4 . AH _____

6. Select the multiplier that corresponds to the average winter time ambient temperature your battery bank will experience._____

7. Multiply line 5 by line 6. This calculation ensures that your battery bank will have enough capacity to overcome cold weather effects. This number represents the total battery capacity you will need. AH _____

8. Enter the amp-hour rating for the battery you have chosen._____

9. Divide the total battery capacity (#7) by the battery amp-hour rating (#8) and round off to the next highest number. This is the number of the batteries wired in parallel required._____

10. Divide the nominal system voltage (12V, 24V, or 48V) by the battery voltage and round off to the next highest number. This is the number of batteries wired in series._____

11. Multiply line 9 by line 10. This is the total number of batteries required._____

Ambient Temperature		Multiplier
80F	26.7C	1.00
70F	21.2C	1.04
60F	15.6C	1.11
50F	10.0C	1.19
40F	4.4C	1.30
30F	-1.1C	1.40
20F	-6.7C	1.59