

Efficiencies Spreadsheet

Manual Input Fields

| WECEB (Project 12401) | | | |
|-----------------------|-------|------------|-----------|
| Step | Power | Efficiency | Cost |
| Windmill | 159.8 | 35 | \$ 329.99 |
| Generator | 96.9 | 35 | \$ - |
| Controls | 92.3 | 95 | \$ - |
| Storage | 76.9 | 80 | \$ 183.49 |

| CDPC (Project 12402) | | | |
|----------------------|-------|------------|----------|
| Step | Power | Efficiency | Cost |
| Line loss | 76.1 | 99 | |
| Controls | 75.4 | 98.5 | \$ 18.00 |
| Regulator | 74.3 | 89.5 | \$ 23.30 |
| Watts | 67.2 | 100 | |

| | |
|-----------------------|------------------|
| Total Power Required: | 159.8 |
| Total Cost: | \$ 554.78 |

Watt-hours (total) = 959.06 watt-hr
 Watt-hours (storage) = 461.31 watt-hr
 Watts/hr. from storage = 19.22 watts/hr.

| Descriptive Statistics | | |
|------------------------|-------|-------|
| Voltage | 12 | Volts |
| Amperes | 0.7 | Amps |
| Wattage | 8.4 | Watts |
| Battery Count | 8 | Count |
| Total Power | 67.2 | Watts |
| Time Constant | 6 | Hours |
| Watt-hours | 403.2 | Wh |

Select 12401 Technology Below

Select Tech. (1,2):

Select 12402 Technology Below

Select Tech. (1,2,3):

Watts

Note: Charging Time for a battery is approx. 5.5 hours

| 12401 | | |
|----------------------|------------|-----------|
| Technology 1 | Efficiency | Cost |
| HAWT Windmill | 35 | \$ 329.99 |
| Generator | 35 | \$ - |
| Controls | 95 | \$ - |
| DC Lead Acid Storage | 80 | \$ 183.49 |

| 12401 | | |
|----------------|------------|-----------|
| Technology 2 | Efficiency | Cost |
| Savonious Mill | 10 | \$ 100.00 |
| Alternator | 30 | \$ 25.00 |
| Regulator | 60 | \$ 3.00 |
| Lithium Ion | 80 | \$ 300.00 |

| 12402 | | |
|--------------------|------------|----------|
| Technology 1 | Efficiency | Cost |
| Micro Controllers | 98.5 | \$ 18.00 |
| Switcher Regulator | 95 | \$ 36.00 |

| 12402 | | |
|-------------------|------------|----------|
| Technology 2 | Efficiency | Cost |
| Discrete Controls | 60 | \$ 28.00 |
| Linear Regulator | 89.5 | \$ 23.30 |

| 12402 | | |
|-----------------|------------|----------|
| Technology 2 | Efficiency | Cost |
| MicroController | 98.5 | \$ 18.00 |
| LT Regulators | 89.5 | \$ 23.30 |