# Budget Section

| Quantity | Description | Mfr # | Mouser# | Cost per Unit | Total Cost |
|---|---|---|---|---|---|
| 2 | MicroController | MSP430F2012TN | 595-MSP430F2012IN | 2.4 | 4.8 |
| 2 | 3.3V line regulator | UA78M33CKCSE3 | 595-UA78M33CKCSE3 | 0.6 | 1.2 |
| 1 | DC/DC isoltated converter | NDTS1215C | 580-NDTS1215C | 16.95 | 16.95 |
| 5 | 3A gate driver | FOD3184 | 512-FOD3184 | 2.72 | 13.6 |
| 1 | Hall Effect Current sensor | HASS 600-S | | 27.5 | 27.5 |
| 2 | Comparator differental | TLC352IP | 595-TLC352IP | 1.39 | 2.78 |
| 10 | 10k ohm resistor | 293-10K-RC | 293-10K-RC | 0.15 | 1.5 |
| 2 | 10k Thermistor 1% | B57863S103F40 | 871-B57863S103F40 | 2.09 | 4.18 |
| 5 | 150ohm resistor for opto-coupler | MF1/2DC1500F | 660-MF1/2DC1500F | 0.16 | 0.8 |
| 20 | 15ohm resistor gate drive to mosfet | RN65D15R0FB14 | 71-RN65D-F-15 | 0.43 | 8.6 |
| 2 | diode 3 amp hold up for current sense | 1N5820 | 844-1N5820 | 0.26 | 0.52 |
| 10 | 100uF caps | EEU-TP1V101 | 667-EEU-TP1V101 | 0.92 | 9.2 |
| 12 | Power mosfets 140A 0.024 | IXFK140N30P | 747-IXFK140N30P | 15.37 | 184.44 |
| 10 | Switching diodes 150A 120ns | IDW100E60 | 726-IDW100E60 | 5.02 | 50.2 |
| | | | | | |
| | | | Total | 326.27 | |

The old budget was about $244, and $82 is added. Even though, we change from current shunt to the Hall Effect currents sensor which is a lot cheaper. The mainly cost change was because using the double number of MSFETs that only to increase the safety factors we had. Also, we add DC/DC converter. We have most of the parts in hand, and we expecting to get the whole parts after the mid of March 2012.Our client will be providing several parts as well, including: the enclosure, heat-sink and the PCB. We will be designing the PCB using Eagle Cad and handing the schematic and gerber files off to our client who will have them made and sent to our team.

There are also other items that were not listed, because they are already available through CEFNS NAU. These include power supplies, measurement equipment Oscilloscopes, and volt meters, along with the computers and simulation software.