Cost of build and equipment -$47,200.26 + HST= $53,336.29

Bundle -$14,450.00

Bundle -$14,450.00

Disconnecting -$1000.00

Wiring-$1000.00

Racking-$2600.00

Hardware-$500.00

Labour-$6000.00

ESA-$700.00

Welding-$3000.00

Panels-$3500.00

Battery Capacity – 22,308KW (usable) at 22% start

Potential PV imput-4000w @4.4hr (Northern Ontario) annual average of peak sun

17,600w per day average

Complete potential energy storage capacity per day 39,908w

Cost of Hydro in Ontario (grid)

Weekend off peak -8.7c

Mid peak-12.2c

On peak-28.6

Average = 16.5c

Total load for unit based on 6-hour day full current load

Grinder x2 = 20,571.42w

EF1=6600w

BB1/2=6,428.57w

Lights=240w

Plugs=960w

Total= 34,799.99w per shift

@ 54.58 A

Recharge @night or after shift at an average of 14.5c per KWH

Recharge time for Batteries 80A at 48V =3840w Per hour

22,308w full batt capacity

5.8 hours from empty to 100%

Cost of BATTERY CHARGING

Power consumption-3.8KW per hour for 5.8hrs=22,308w

Energy Price -.28c worst case (on PEAK)

Usage Time-5.8hrs

Power Consumed -129.34KW

Cost- $36.21

Cost of Electrical Operation Per Calander year -$13,216.65

Cost of running unit purely on Utility Shore power:

Usage Time-8hrs

34.79KW @ Peak of .28c

=Power consumed -278,32KWH

=Cost Per day- $77.92

Cost of Electrical Operation Per Calander year-$28,440.80

Difference of $15,225.15

If no government incentive applied it would take 53,336.29 / 15,225.15

=3.5 years to pay for complete build

If a government clean energy ITC credit is applied of 30% then

53,336.29 – 30%ITC =37,335.40

Therefore 37,335.40 / 15,225.15

=2.4 years to pay off complete build