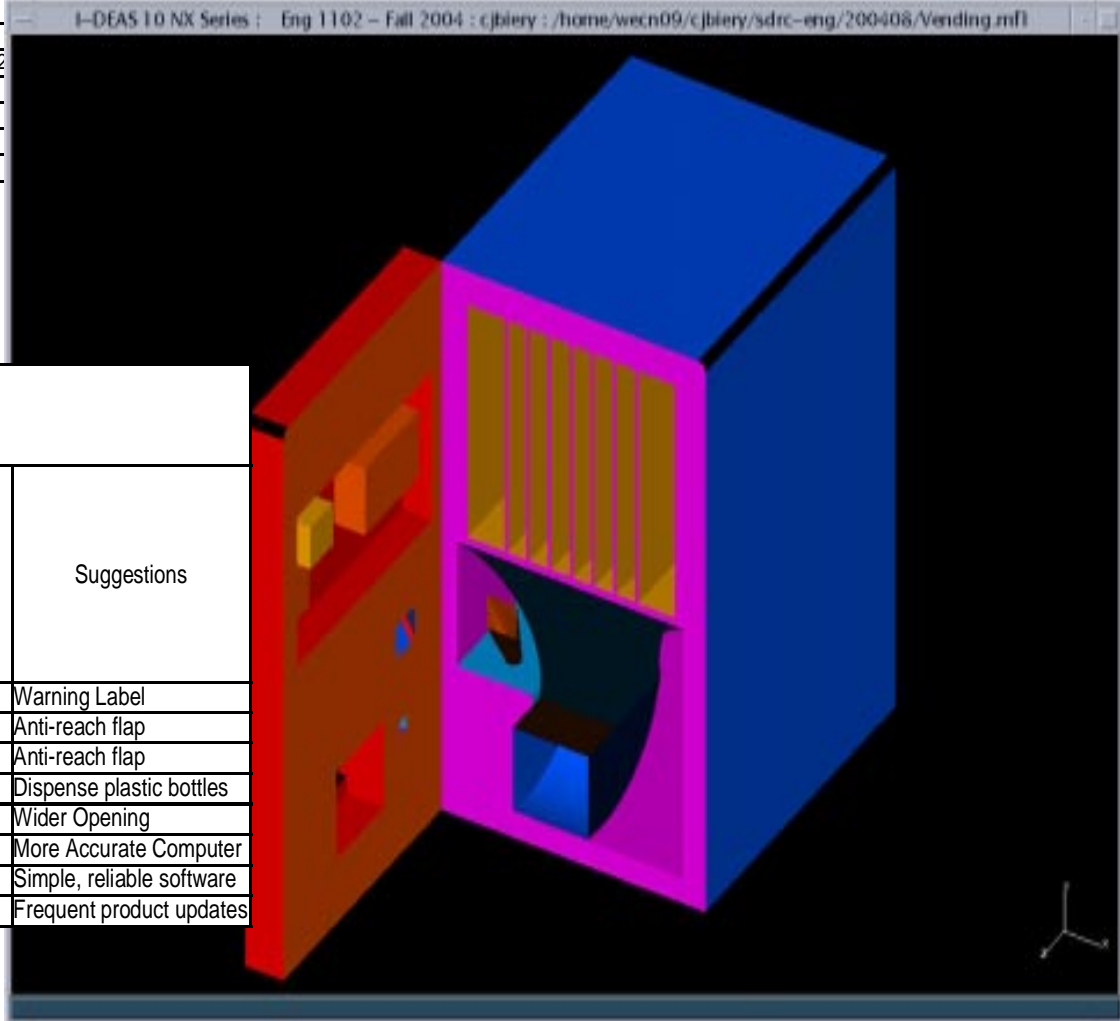


Eng 1102 Section 10
Team 3

Nickie Barna
Jake Barden
Jeff Piaskowski
Cameron Biery

Energy Budget

Item	Voltage (V)	Current (A)	Power Req'd (kw)	Unit Energy Cost (\$/kw-hr)	Daily Operating Hours	Daily Energy Cost (\$)	Yearly Energy Cost (\$)
Cooling Unit (running)	110	1	0.11	0.07	20.500	\$0.16	\$57.62
Cooling Unit (surge)	110	14.5	1.6	0.07	3.500	\$0.39	\$142.63
Vending Motors	110	1	0.11	0.07	0.033	\$0.00	\$0.09
Bill Acceptor (idle)	110	0.2	0.02	0.07	23.945	\$0.04	\$13.46
Bill Acceptor (accepting)	110	0.75	0.08	0.07	0.055	\$0.00	\$0.12
Change Acceptor (idle)	110	0.2	0.02	0.07	23.876	\$0.04	\$13.42
Change Acceptor (accepting)	110	0.75	0.08	0.07			
Change Acceptor (returning)	110	3.6	0.4	0.07			
Credit Card Machine (idle)	110	0.2	0.02	0.07	2		
Credit Card Machine (running)	110	0.75	0.08	0.07			
Total cost per day							
References: www.geneng.mtu.edu, www.howstuffworks.com							



Vending Machine Hazard Analysis

Description of Hazard	Rating Type			Total	Suggestions
	Severity	Occurrence	Failure Detection		
Machine can be tipped over	10	3	10	300	Warning Label
Foreign objects lodged in change drop	7	4	10	280	Anti-reach flap
Foreign objects lodged in product funnel	7	3	10	210	Anti-reach flap
Beverage explodes during release	6	2	8	96	Dispense plastic bottles
Coins jammed in change collector	6	3	2	36	Wider Opening
Improper money returned	7	4	3	84	More Accurate Computer
Computer malfunction	5	3	1	15	Simple, reliable software
No product dispensed	5	6	2	60	Frequent product updates