Nick Notthoff
Engr 115
2-5pm Thursday Lab
12-Oct-12

Input Parameters	
Tempature(K)	293.15
Pressure(atm)	1.0089
R Value(atm*L/K*mol)	0.0821
Gibbs Free Energy of H2O(kJ)	237

Data Analysis

Trial 1

Time(second)	Hydrogen Vol(ml)	Voltage(V)	Current(A)	Calculations: moles of H
60	3	11.95	0.79	0.000125758
120	14	11.93	0.86	0.000461113
180	20	11.91	0.93	0.000251516
229	25	11.91	0.98	0.000209597

Trial 2

Time(second)	Hydrogen Vol(ml)	Voltage(V)	Current(A)	moles of H
60	34	11.9	1	0.000377275
120	42	11.88	1.07	0.000335355
180	50	11.88	1.12	0.000335355

Trial 3

Time(second)	Hydrogen Vol(ml)	Voltage(V)	Current(A)	moles of H
60	60	11.86	1.16	0.000419194
120	68	11.85	1.23	0.000335355
180	75	11.84	1.24	0.000293436

Average Electrolyzer Efficiency(%	10%

Power(W)	Chem Energy(J)	Electrical Energy(J)	Efficiency(%)
9.4405	29.80469398	566.43	5%
10.2598	109.2838779	615.588	18%
11.0763	59.60938797	664.578	9%
11.6718	49.67448997	571.9182	9%

Power(W)	Chem Energy(J)	Electrical Energy(J)	Efficiency(%)
11.9	89.41408195	714	13%
12.7116	79.47918396	762.696	10%
13.3056	79.47918396	798.336	10%

Power(W)	Chem Energy(J)	Electrical Energy(J)	Efficiency(%)
13.7576	99.34897995	825.456	12%
14.5755	79.47918396	874.53	9%
14.6816	69.54428596	880.896	8%