



Summary - Green Hydraulic Power Unit Installation at AST

SCE Customer Advanced Structural Technologies (AST), Inc. replaced existing hydraulic pump with a variable speed fixed displacement drive controlled pump manufactured by Green Hydraulic Power. SCE conducted pre data logging measurements (kWh, kW, volt, amp, PF) from 4/23 to 5/16. After the technology was installed, SCE conducted post data logging measurements (kW, volt, amp, PF) from 6/13 to 8/1.

One specific part (5022) was manufactured during the pre (5/11 & 5/14) and post (6/19) data logging periods. The part production data is given below. Shift 1 runs from 5:30 AM – 2 PM and Shift 2 runs from 2 PM – 10:30 PM. Each day AST manufactured an average of 55 total parts. The data was calculated to identify to the total kWh, average kW, average kWh/part and savings.

Date	Shift	Qty	kWh	Avg kW	kWh/part
5/11/2018	1	31	288.86	36.11	9.32
5/11/2018	2	26	310.10	38.76	11.93
total			598.956		
5/14/2018	1	30	278.64	34.83	9.29
5/14/2018	2	25	283.54	35.45	11.34
total			562.172		
6/19/2018	1	10	38.32	6.22	3.83
6/19/2018	2	42	82.66	9.18	1.97
total			120.982		

	kWh/part	Avg kW
Avg Pre	10.47	36.29
Avg Post	2.90	7.70
Savings	7.57	28.58
-\$-Savings	\$0.91	\$4,287.46

*Incentive rates \$0.12/ kWh, \$150/kW

The demand kW profile comparing the pre (5/11 & 5/14) and post (6/19) operations is given below in the graph.

