

Project Title: Sample Project

Project ID: 30206

Project Manger: T.M.

Prepared By: W.T

Checked By: D.W.

Sheet: 1 of 1

Date: 7/3/16

VFD vs. CONSTANT SPEED DRIVE OPERATING COST ESTIMATE

Notes: Annual Energy Cost Calc.

$$EnergyCostPerYear = \frac{(HP) \times (0.746kW / HP) \times (hr / yr) \times (\$/ kWh) \times (LF)}{MotorEfficiency}$$

Constant Speed								
Pump Flow Load	GPM	Time @ Flow Condition	HP	kW	Hours	kWh	\$/kWhr	Cost
100%	400	100%	15.0	11.19	4,380	49,012	\$0.10	\$4,901
6 month = 4,380 hrs							Total =	\$4,901

Variable Speed								
Pump Flow Load	GPM	Time @ Flow Condition	HP	kW	Hours	kWh	\$/kWhr	Cost
50%	200	40%	1.9	1.40	1,752	2,451	\$0.10	\$245
60%	240	20%	3.2	2.42	876	2,117	\$0.10	\$212
70%	280	20%	5.1	3.84	876	3,362	\$0.10	\$336
80%	320	10%	7.7	5.73	438	2,509	\$0.10	\$251
90%	360	5%	10.9	8.16	219	1,786	\$0.10	\$179
100%	400	5%	15.0	11.19	219	2,451	\$0.10	\$245
					4,380	Total =	\$1,468	

* Office, Cooling Load Profile

Annual Energy Savings = \$3,434

REMARKS:

Fan operating cost comparison.