

Project Title: Sample Project
 Project ID: 130206
 Project Manger: T.M.

Prepared By: W.T Sheet: 1 of 1
 Checked By: D.W. Date: 7/3/2016

PUMP ENERGY CONSUMPTION & OPERATING COST ESTIMATES

Notes:

Annual Energy Cost for a Chilled Water Pump

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

Pump Operating Cost Estimate				
	Existing	Proposed		Remarks
Pump GPM	528	528	GPM	
Pump Head	66	66	ft	
Water HP =	8.80	8.80	HP	
Pump Efficiency	65%	75%	Eff.	Typical: 60% to 80%
BHP or Motor HP =	13.54	11.73	BHP	
Motor HP Selected	20	20	HP	
Load Factor =	0.68	1.00	%	LF = BHP / Motor HP
Energy Cost Rate	\$0.13	\$0.13	\$/kWh	
Motor Efficiency	90%	91%	Eff.	Typical: 85% to 95%
Operating hours per year	4,380	4,380	hrs	6 months cooling season (24/7)
Annual Energy Cost =	\$6,390	\$9,325		

Existing vs. Proposed = (\$2,936)

REMARKS:

Pump operating cost comparison.