



Cutler-Hammer

Energy Savings Estimation Report

Date: 7/27/2021

To: Newark Engineer

Prepared by:

Project: 25 hp Pump Example

Utility:

Cost per kWh: \$ 0.14

Estimated Energy Savings

System	Energy Usage
Present System:	171,903 kWh
AFD System:	37,895 kWh
Energy Saved:	134,009 kWh

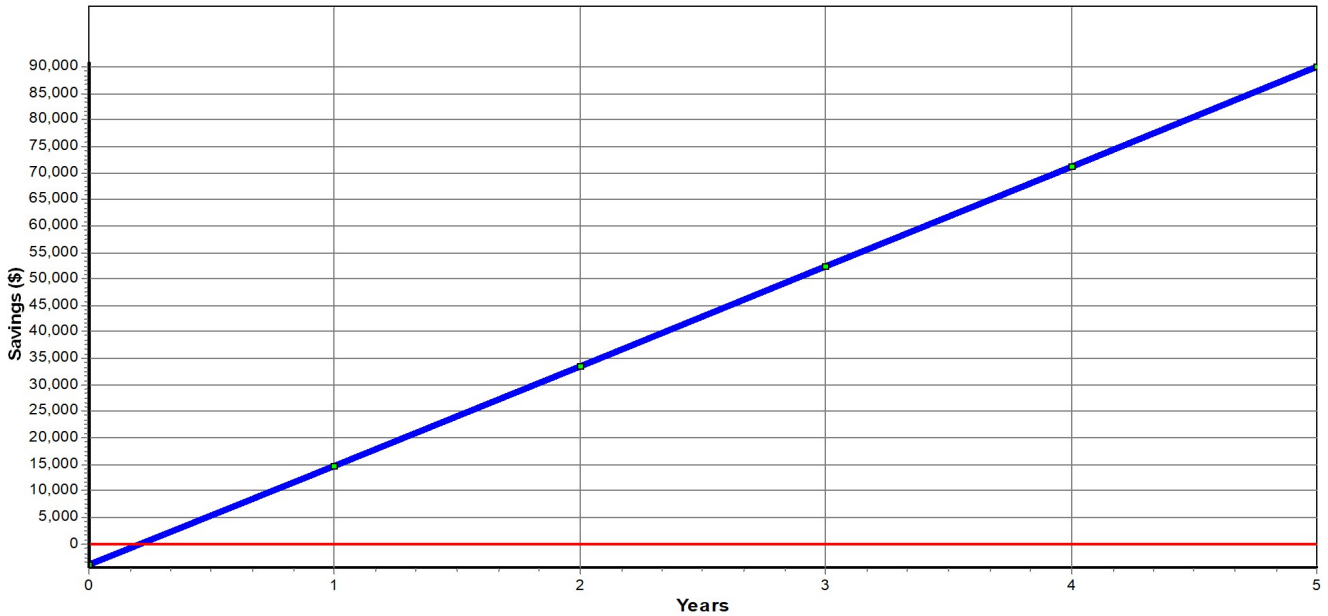
Estimated Savings:	Total
Energy Saved/Year:	\$ 18,797
Yearly Savings:	\$ 18,797

Estimated Carbon Dioxide Emissions

System	Carbon Footprint
Present System:	60.60 Ton(s)
AFD System:	13.36 Ton(s)
Carbon Dioxide Savings:	47.24 Ton(s)

Estimated Payback Time: 0.213 Years

Simple Payback: 25 hp Pump Example



Carbon Dioxide (CO2) savings estimation based on electricity produced from Coal at 0.705 of CO2/Lbs

Weight Units: English

Calculations are based on available data. Eaton/Cutler-Hammer assumes no responsibility for the accuracy of the supplied data or of this report.

25 hp example

System Data

System Identification: 25 hp example
 Type: Pump System
 Flow Control: None (Across-the-Line)

Pump System

Utility		Motor Data		Duty Cycle Information				
Cost per kWh:	\$ 0.14	Power:	25 HP	Flow (%)	Time (%)	Time (Hours)		
Utility Incentive:	\$ 0 per HP; One-time	Efficiency:	95 %	100 %	1 %	88		
AFD Data				90 %	2 %	175		
Drive Cost:	\$ 4,000					80 %	9 %	788
Install Cost:	\$ 0					70 %	17 %	1489
Operation				60 %	24 %	2102		
Hours per Day of Operation:	24 Hours					50 %	17 %	1489
Days per Week of Operation:	7 Days					40 %	13 %	1139
Weeks per Year of Operation:	52 Weeks					30 %	11 %	964
Total Hours:	8760 Hours/Year					20 %	6 %	526
				10 %	0 %	0		

Estimated Carbon Dioxide Emissions

System	Carbon Footprint Single	Carbon Footprint Total
Present System:	60.60 Ton(s)	60.60 Ton(s)
Drive System:	13.36 Ton(s)	13.36 Ton(s)
Savings:	47.24 Ton(s)	47.24 Ton(s)

Payback Analysis

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Equipment Cost:	\$ 4,000					\$ 4,000
Installation Cost:	\$ 0					\$ 0
Utility Rebate:	\$ 0					\$ 0
Energy Saved:	\$ 18,797	\$ 18,797	\$ 18,797	\$ 18,797	\$ 18,797	\$ 93,986
Total:	\$ 14,797	\$ 33,594	\$ 52,392	\$ 71,189	\$ 89,986	\$ 89,986

Estimated Energy Savings

Operating Info:	Single	Total	Estimated Savings:	Single	Total
Operating Hours:	8,760 Hrs	8,760 Hrs	Energy Saved/Year:	\$ 18,797	\$ 18,797
Present System:	171,903 kWh	171,903 kWh	Demand Savings/Year:	\$ 0	\$ 0
AFD System:	37,895 kWh	37,895 kWh	Yearly Savings:	\$ 18,797	\$ 18,797
Energy Saved:	134,009 kWh	134,009 kWh	Estimated Payback Time:	0.213 Years	

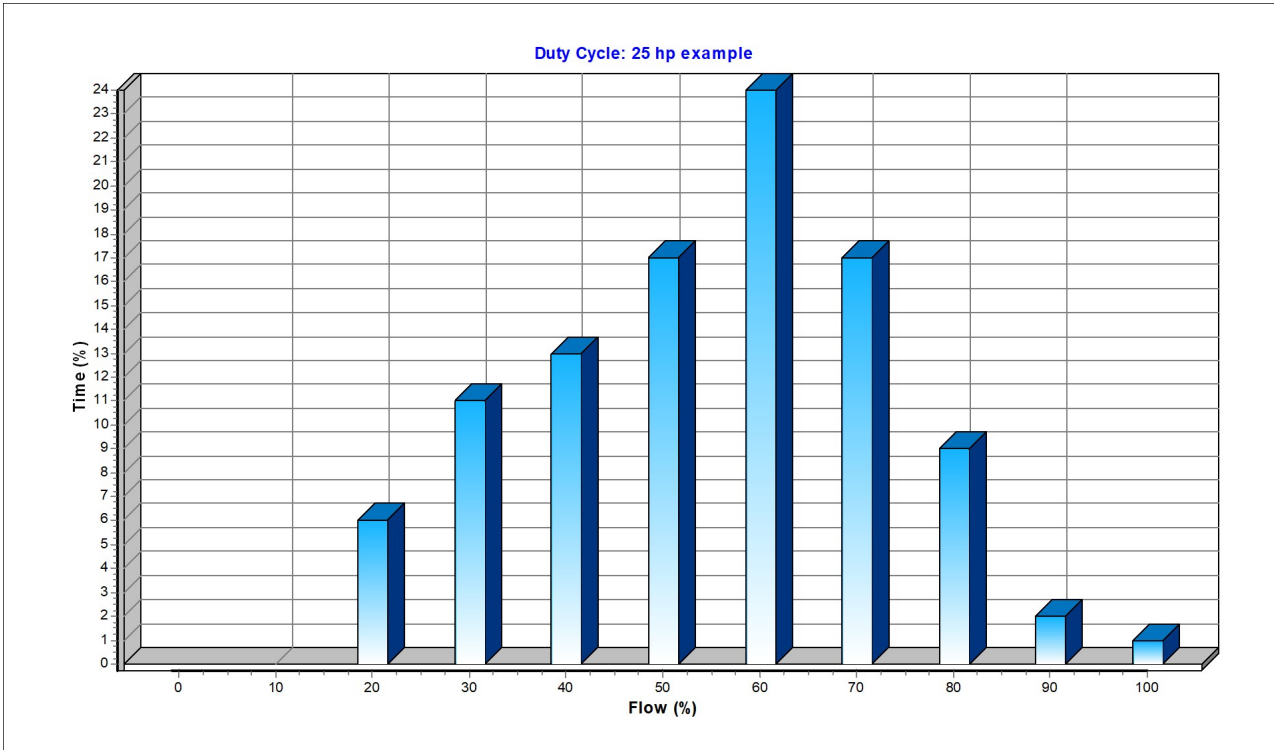
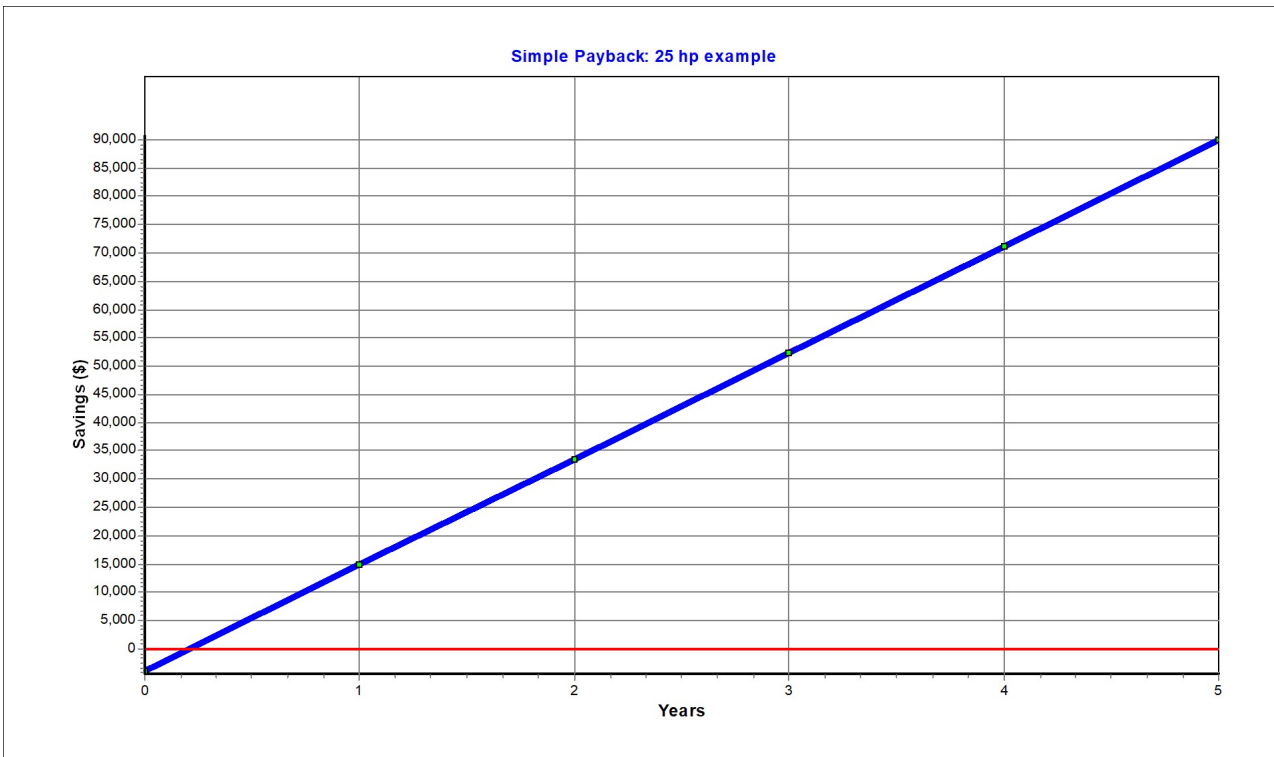
Carbon Dioxide (CO₂) savings estimation based on electricity produced from Coal at 0.705 of CO₂/Lbs

Weight Units: English

Calculations are based on available data. Eaton/Cutler-Hammer assumes no responsibility for the accuracy of the supplied data or of this report.

25 hp example

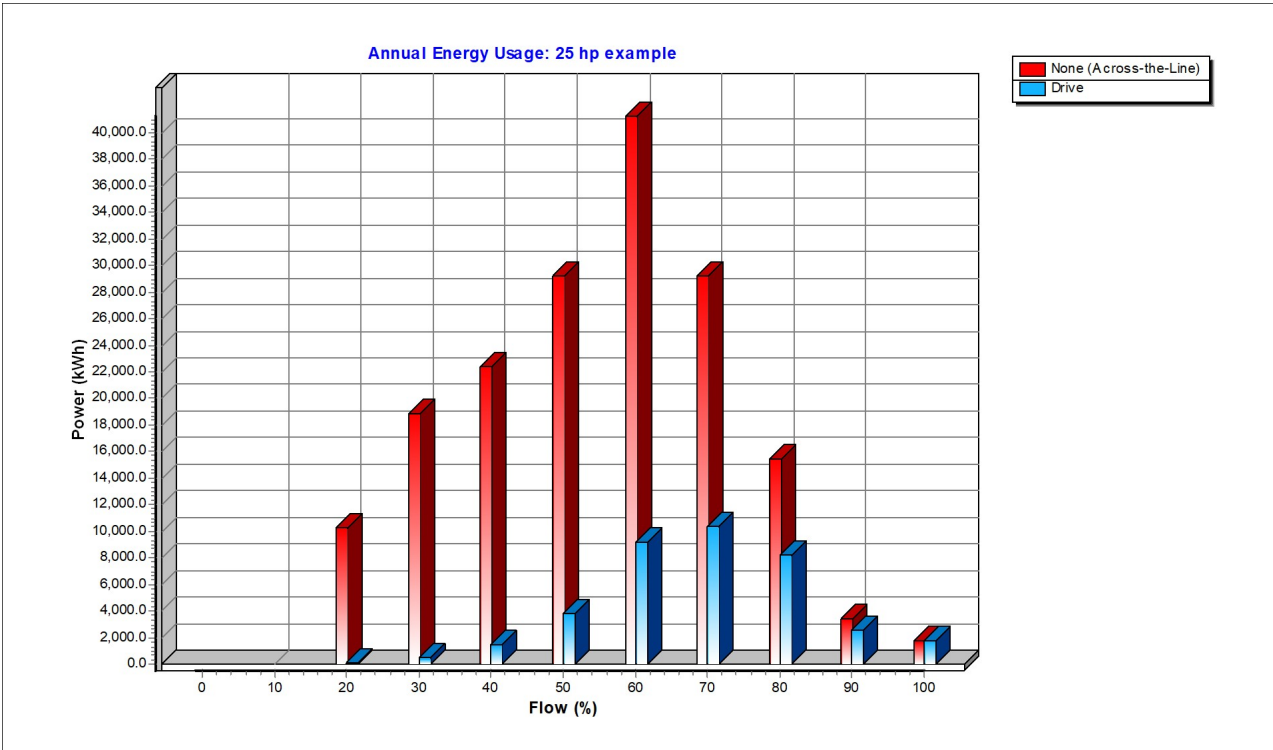
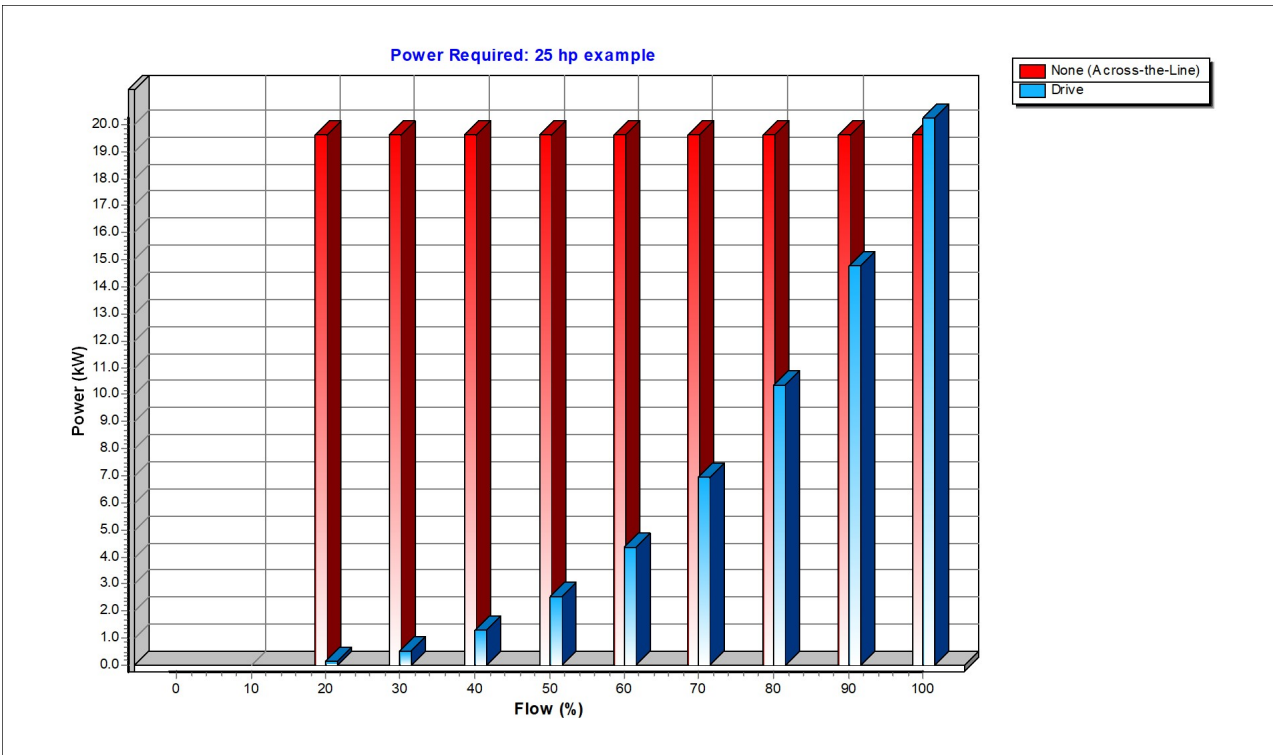
Chart(s)



Calculations are based on available data. Eaton/Cutler-Hammer assumes no responsibility for the accuracy of the supplied data or of this report.

25 hp example

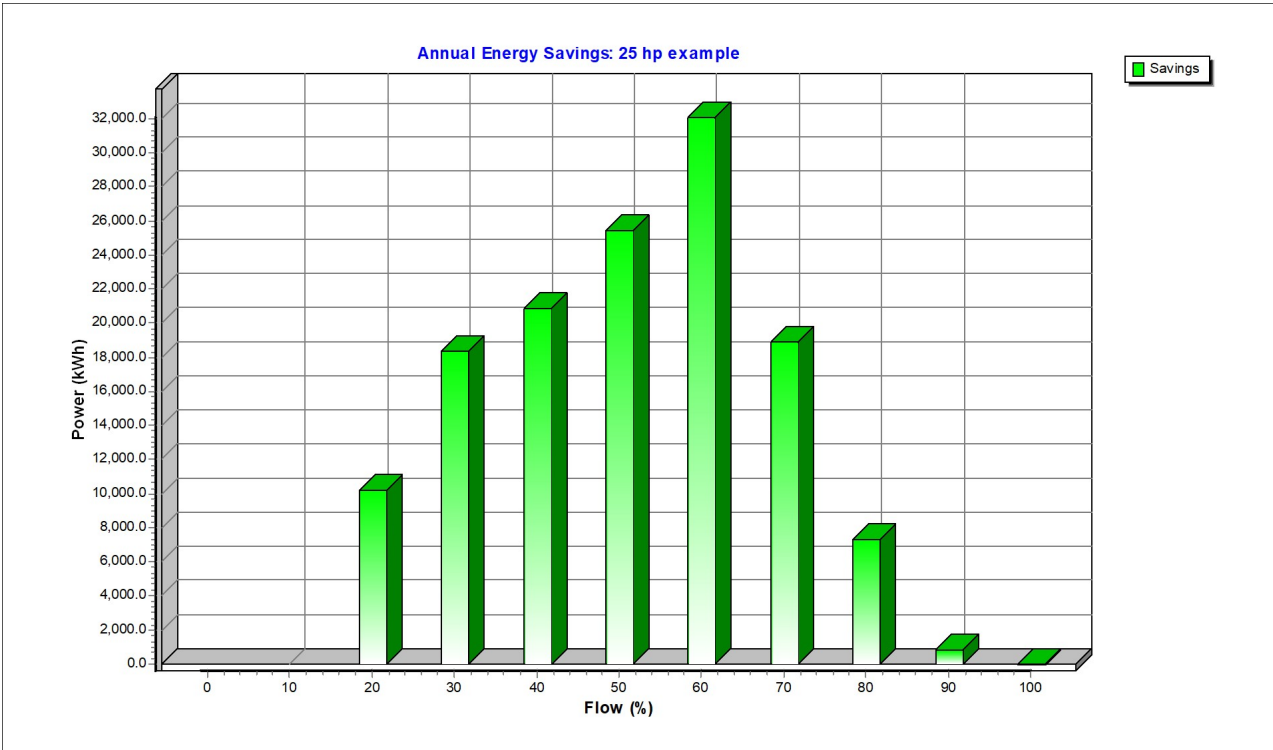
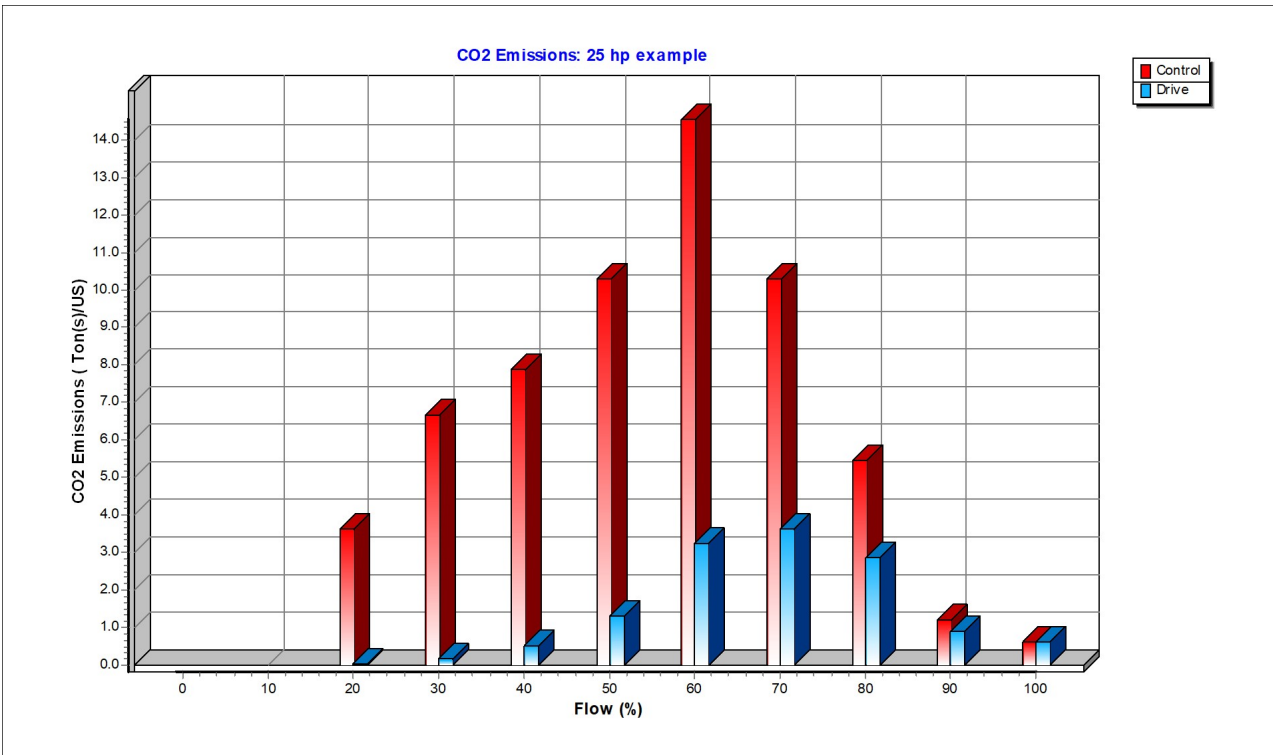
Chart(s)



Calculations are based on available data. Eaton/Cutler-Hammer assumes no responsibility for the accuracy of the supplied data or of this report.t.

25 hp example

Chart(s)



Calculations are based on available data. Eaton/Cutler-Hammer assumes no responsibility for the accuracy of the supplied data or of this report.