

YASKAWA

Energy Savings Predictor Report iQpump Edition

To: Mark Tyl
Director of Operations
Rocha Controls
5025 W Rio Vista Ave
Tampa, FL 33634

Date: 3/5/2021

**Prepared
by:**

Project: City of Deltona - Lift Station 21

Utility: Duke Energy	Base Rate:	\$ 1
Demand Charge:	\$ 0	Alternate Rate: \$ 0

Estimated Energy Savings

System	Energy Usage
Present System:	3,413 kWh
Drive System:	1,710 kWh
Energy Saved:	1,703 kWh
Predicted Savings:	Total
Energy Saved/Year:	\$ 1,703
Yearly Savings:	\$ 1,703

Carbon Dioxide Emissions

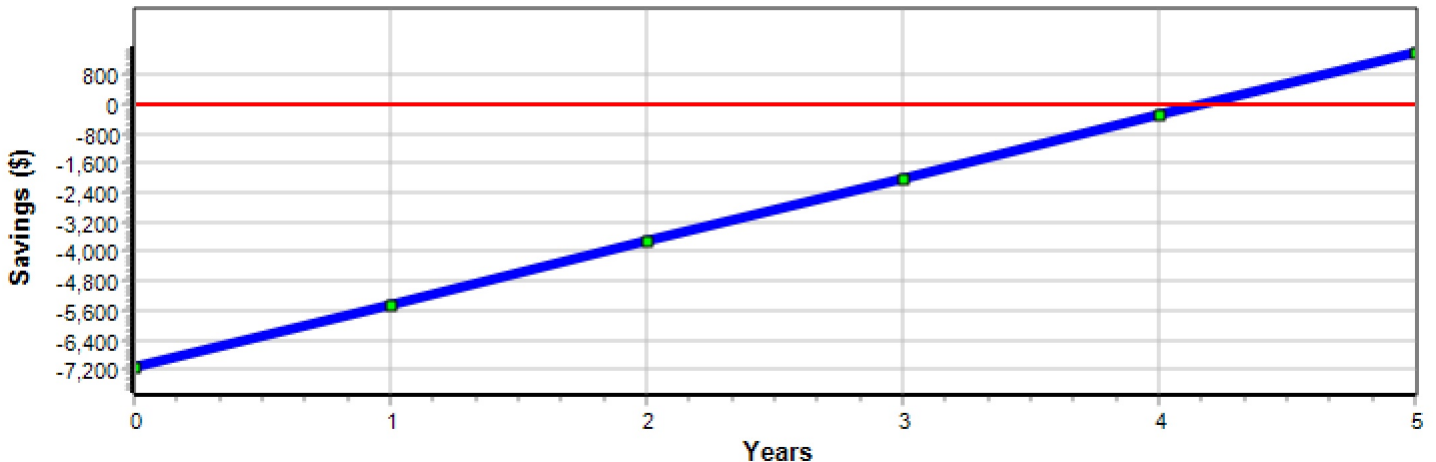
System	Carbon Footprint
Present System:	1.25 Ton(s)
Drive System:	0.63 Ton(s)
Carbon Dioxide Savings:	0.62 Ton(s)



Total Project Cost:	\$ 7,118
Total Project Rebates:	\$ 1
Simple Project Payback/ROI:	4.178 Years

Simple Payback: City of Deltona - Lift Station 21

Cumulative (Zero-crossing indicates break-even point)



Carbon Dioxide (CO₂) savings estimation based on electricity produced from Coal at 0.733 lbs of CO₂ per kWh

Weight Units: English

Calculations are based on available data. Yaskawa America, Inc. assumes no responsibility for the accuracy of the supplied data or of this report.

Pump1

System Data

System Identification:

Pump1

Type:

Pump System

Flow Control:

Discharge Valve

Minimum Head:

5 ft wg

Pump System

Motor Data		Drive and Installation Data		Duty Cycle			
Efficiency:	93.6 %	Drive Cost:	\$ 3,559	Rate	Flow (%)	Time (%)	Time (Hours)
Power:	25 HP	Install Cost:	\$ 0	B	100 %	2 %	2
Voltage:	480 V	Dem. Rebate:	\$ 0.10	B	90 %	9 %	9
FLA:	32.6 A	# Systems:	1	B	80 %	21 %	22
Hours of Operation		Incentive		B	70 %	24 %	25
Hours per Day:	2 Hours	Utility Rebate:	\$ 0 per system; One-time	B	60 %	21 %	22
Days per Week:	1 Days	Drive Selection		B	50 %	14 %	15
Weeks per Year:	52 Weeks			B	40 %	6 %	6
Total Hours:	104 Hours/Year	Catalog #:	CIMR-PW4A0038FAA	B	30 %	3 %	3
				B	20 %	0 %	0
				B	10 %	0 %	0
				B	= Base Rate		
				A	= Alternate Rate		

Carbon Dioxide Emissions

System

Carbon Footprint Single

Carbon Footprint Total

Present System:

1,250.85 lbs

1,250.85 lbs

Drive System:

626.56 lbs

626.56 lbs

Savings:

624.28 lbs

624.28 lbs



Payback Analysis

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Equipment Cost:	\$ 3,559					\$ 3,559
Installation Cost:	\$ 0					\$ 0
Utility Rebate:	\$ 0					\$ 0
Demand Savings:	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Energy Saved:	\$ 852	\$ 852	\$ 852	\$ 852	\$ 852	\$ 4,258
Total:	\$ -2,707	\$ -1,855	\$ -1,004	\$ -152	\$ 700	\$ 700

Estimated Energy Savings

Operating Info:		Single	Total	Predicted Savings:		Single	Total
Operating Hours:	104 Hours		104 Hours	Energy Saved/Year:		\$ 852	\$ 852
Present System:	1,706 kWh		1,706 kWh	Demand Savings/Year:		\$ 0	\$ 0
Drive System:	855 kWh		855 kWh	Yearly Savings:		\$ 852	\$ 852
Energy Saved:	852 kWh		852 kWh	Simple Payback Time:	4.178 Years		

Carbon Dioxide (CO2) savings estimation based on electricity produced from Coal at 0.733 lbs of CO2 per kWh

Weight Units: English

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Pump2

System Data

System Identification:

Pump2

Type:

Pump System

Flow Control:

Discharge Valve

Minimum Head:

5 ft wg

Pump System

Motor Data		Drive and Installation Data		Duty Cycle			
Efficiency:	93.6 %	Drive Cost:	\$ 3,559	Rate	Flow (%)	Time (%)	Time (Hours)
Power:	25 HP	Install Cost:	\$ 0	B	100 %	2 %	2
Voltage:	480 V	Dem. Rebate:	\$ 0.10	B	90 %	9 %	9
FLA:	32.6 A	# Systems:	1	B	80 %	21 %	22
Hours of Operation		Incentive		B	70 %	24 %	25
Hours per Day:	2 Hours	Utility Rebate:	\$ 0 per system; One-time	B	60 %	21 %	22
Days per Week:	1 Days	Drive Selection		B	50 %	14 %	15
Weeks per Year:	52 Weeks			B	40 %	6 %	6
Total Hours:	104 Hours/Year	Catalog #:	CIMR-PW4A0038FAA	B	30 %	3 %	3
				B	20 %	0 %	0
				B	10 %	0 %	0
				B	= Base Rate		
				A	= Alternate Rate		

Carbon Dioxide Emissions

System

Carbon Footprint Single

Carbon Footprint Total

Present System:

1,250.85 lbs

1,250.85 lbs

Drive System:

626.56 lbs

626.56 lbs

Savings:

624.28 lbs

624.28 lbs



Payback Analysis

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Equipment Cost:	\$ 3,559					\$ 3,559
Installation Cost:	\$ 0					\$ 0
Utility Rebate:	\$ 0					\$ 0
Demand Savings:	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Energy Saved:	\$ 852	\$ 852	\$ 852	\$ 852	\$ 852	\$ 4,258
Total:	\$ -2,707	\$ -1,855	\$ -1,004	\$ -152	\$ 700	\$ 700

Estimated Energy Savings

Operating Info:		Single	Total	Predicted Savings:		Single	Total
Operating Hours:	104 Hours		104 Hours	Energy Saved/Year:		\$ 852	\$ 852
Present System:	1,706 kWh		1,706 kWh	Demand Savings/Year:		\$ 0	\$ 0
Drive System:	855 kWh		855 kWh	Yearly Savings:		\$ 852	\$ 852
Energy Saved:	852 kWh		852 kWh	Simple Payback Time:	4.178 Years		

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