East Hospital Survey

Current Motor Inventory

Facility	ID #	Description	Process	Manufacturer	Model #	NP Volts	NP Speed	Rated Amps	NP Eff.	Meas. Volts	Measured Amperage A	B	C	Avg.	kW	Frame Type	Enc.	Est. Eff.	Operating Hours / Yr	HP	Estimated kWh Per Year	Estimated Operating Cost Per Year
East Hospital	1	Condenser Pump #5	¤	¤	¤	460	1760	¤	¤	¤	¤	¤	¤	¤	15.6	284T	ODP	89.4%	8,760	25	137,059	$ 7,538
East Hospital	2	Condenser Pump #5	¤	¤	¤	460	1760	¤	¤	¤	¤	¤	¤	¤	15.6	284T	ODP	89.4%	8,760	25	137,059	$ 7,538
East Hospital	3	Condenser Pump #5	¤	¤	¤	460	1760	¤	¤	¤	¤	¤	¤	¤	15.6	284T	ODP	89.4%	8,760	25	137,059	$ 7,538
East Hospital	4	Condenser Pump #5	¤	¤	¤	460	1760	¤	¤	¤	¤	¤	¤	¤	15.6	284T	ODP	89.4%	8,760	25	137,059	$ 7,538
East Hospital	5	Condenser Pump #5	¤	¤	¤	460	1760	¤	¤	¤	¤	¤	¤	¤	15.6	284T	ODP	89.4%	8,760	25	137,059	$ 7,538
East Hospital	6	Condenser Pump #5	¤	GE	5KW324AL205	460	1760	¤	¤	¤	¤	¤	¤	¤	15.6	284T	ODP	89.4%	8,760	25	137,059	$ 7,538
East Hospital	7	Air Pump HA7	¤	Magnatek	¤	230/460	1770	¤	93.0%	¤	¤	¤	¤	¤	30.1	326T	ODP	93.0%	8,760	50	263,506	$ 14,493
East Hospital	8	AH #10	¤	Magnatek	¤	230/460	1780	¤	¤	¤	¤	¤	¤	¤	24.8	326T	ODP	90.2%	8,760	40	217,349	$ 11,954
East Hospital	9	H25AH	¤	Magnatek	¤	230/460	1765	¤	91.7%	¤	¤	¤	¤	¤	30.5	324T	TEFC	91.7%	8,760	50	267,242	$ 14,698
East Hospital	10	H25AH	¤	¤	¤	230/460	1765	¤	91.7%	¤	¤	¤	¤	¤	30.5	324T	TEFC	91.7%	8,760	50	267,242	$ 14,698
East Hospital	11	H25AH	¤	¤	¤	230/460	1765	¤	91.7%	¤	¤	¤	¤	¤	30.5	324T	TEFC	91.7%	8,760	50	267,242	$ 14,698
East Hospital	12	AH #1	¤	¤	¤	460	1654‡	¤	¤	¤	¤	¤	¤	¤	18.8	286T	TEFC	89.4%	8,760	30	164,470	$ 9,046
East Hospital	13	AH #2	¤	¤	¤	460	1654‡	¤	¤	¤	¤	¤	¤	¤	18.8	286T	TEFC	89.4%	8,760	30	164,470	$ 9,046
East Hospital	14	AH #3	¤	¤	¤	460	1654‡	¤	¤	¤	¤	¤	¤	¤	18.8	286T	TEFC	89.4%	8,760	30	164,470	$ 9,046
East Hospital	15 †	Cooling Tower Motors	¤	Siemens	RCZCT	460	1773	¤	¤	¤	¤	¤	¤	¤	18.8	286T	TEFC	89.4%	8,760	30	164,470	$ 9,046
East Hospital	16 †	Cooling Tower Motors	¤	Siemens	RCZCT	460	1773	¤	¤	¤	¤	¤	¤	¤	18.8	286T	TEFC	89.4%	8,760	30	164,470	$ 9,046
East Hospital	17 †	Cooling Tower Motors	¤	Siemens	RCZCT	460	1770	¤	¤	¤	¤	¤	¤	¤	15.6	286T	TEFC	89.4%	8,760	25	137,059	$ 7,538
East Hospital	18 †	Cooling Tower Motors	¤	¤	¤	460	1770	¤	¤	¤	¤	¤	¤	¤	15.6	286T	TEFC	89.4%	8,760	25	137,059	$ 7,538
East Hospital	19 †	Cooling Tower Motors	¤	GE	5KS326AL205C	460	1770	¤	¤	¤	¤	¤	¤	¤	15.6	286T	TEFC	89.4%	8,760	25	137,059	$ 7,538
East Hospital	20	#2 Chiller	¤	GE	5KS326AL205C	230/460	1765	¤	92.4%	¤	¤	¤	¤	¤	18.2	286T	ODP	92.4%	8,760	30	159,131	$ 8,752
East Hospital	21	AH #18	¤	GE	5KS324AL205C	230/460	1780	¤	¤	¤	¤	¤	¤	¤	31.0	326T	ODP	90.2%	8,760	50	271,686	$ 14,943
East Hospital	22	AH #19	¤	GE	5KS326AL205C	230/460	1780	¤	¤	¤	¤	¤	¤	¤	31.0	326T	ODP	90.2%	8,760	50	271,686	$ 14,943
East Hospital	23	AH #21	¤	Marathon	Gould Pump	230/460	1780	¤	¤	¤	¤	¤	¤	¤	24.8	326T	ODP	90.2%	8,760	40	217,349	$ 11,954
East Hospital	24	AH #22	¤	Marathon	Gould Pump	230/460	1780	¤	¤	¤	¤	¤	¤	¤	31.0	326T	ODP	90.2%	8,760	50	271,686	$ 14,943
East Hospital	25 §	Pump #17	¤	Marathon	Gould Pump	230/460	1770	¤	83.5%	¤	¤	¤	¤	¤	26.8	324T	ODP	83.5%	8,760	40	234,789	$ 12,913
East Hospital	26 §	Pump #1	¤	Lincoln	TF4679	230/460	1770	¤	92.0%	¤	¤	¤	¤	¤	24.3	324T	ODP	92.0%	8,760	40	213,097	$ 11,720
East Hospital	27 §	Pump #15	¤	Marathon	¤	230/460	1770	¤	83.5%	¤	¤	¤	¤	¤	26.8	324T	ODP	83.5%	8,760	40	234,789	$ 12,913
East Hospital	28	Pump #22	¤	¤	¤	230/460	1765	¤	92.4%	¤	¤	¤	¤	¤	30.3	324T	ODP	92.4%	8,760	50	265,218	$ 14,587
East Hospital	29 §	Cooling Loop Pump #3	Pot Feeder	¤	¤	460	1760	¤	93.0%	¤	¤	¤	¤	¤	30.1	326T	ODP	93.0%	8,760	50	263,506	$ 14,493
East Hospital	30	Condenser Pump #3	¤	¤	¤	230/460	1800	¤	92.4%	¤	¤	¤	¤	¤	18.2	286T	ODP	92.4%	8,760	30	159,131	$ 8,752

Total HP	Total Annual kWh	Total Annual Cost
1,085	5,900,530	$ 324,529

Notes/Assumptions:

1. Motor List Discount is 50%
2. Electricity Cost is $0.055/kWh (includes demand charge)
3. 75% Load unless otherwise given
4. ¤ = Data not available
5. § = Motor on Variable Frequency Drive
6. † = Two speed motor, more data necessary for accurate efficiency prediction
7. ‡ = Data is suspect, requires further investigation

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Motors and Drives

August 12, 2008

East Hospital Survey

Motor Action Plan

Facility	ID #	Hp	Estimated Operating Efficiency	Estimated Repair Cost	Replacement Catalog #	Replacement Manufacturer	Replacement Model	Replacement Efficiency	Replacement List Cost	Replacement Actual Cost	Energy Savings (kWh)	Energy Savings ($/yr.)	Payback (Years) Replace Now	Payback (Years) Replace at Failure	Immediate Action	Action Upon Failure
East Hospital	1	25	89.4%	$ 571	M9935	GE	Ultra Series	94.1%	¤	$ 1,081	6,442	$ 354	3.1	1.4	None	Replace
East Hospital	2	25	89.4%	$ 571	M9935	GE	Ultra Series	94.1%	¤	$ 1,081	6,442	$ 354	3.1	1.4	None	Replace
East Hospital	3	25	89.4%	$ 571	M9935	GE	Ultra Series	94.1%	¤	$ 1,081	6,442	$ 354	3.1	1.4	None	Replace
East Hospital	4	25	89.4%	$ 571	M9935	GE	Ultra Series	94.1%	¤	$ 1,081	6,442	$ 354	3.1	1.4	None	Replace
East Hospital	5	25	89.4%	$ 571	M9935	GE	Ultra Series	94.1%	¤	$ 1,081	6,442	$ 354	3.1	1.4	None	Replace
East Hospital	6	25	89.4%	$ 571	M9935	GE	Ultra Series	94.1%	¤	$ 1,081	6,442	$ 354	3.1	1.4	None	Replace
East Hospital	7	50	93.0%	$ 909	M9917	GE	Ultra Series	94.7%	¤	$ 1,918	4,480	$ 246	7.8	4.1	None	Repair
East Hospital	8	40	90.2%	$ 776	M9915	GE	Ultra Series	94.6%	¤	$ 1,636	9,563	$ 526	3.1	1.6	None	Replace
East Hospital	9	50	91.7%	$ 1,095	M9917	GE	Ultra Series	94.7%	¤	$ 1,918	8,017	$ 441	4.3	1.9	None	Replace
East Hospital	10	50	91.7%	$ 1,095	M9917	GE	Ultra Series	94.7%	¤	$ 1,918	8,017	$ 441	4.3	1.9	None	Replace
East Hospital	11	50	91.7%	$ 1,095	M9917	GE	Ultra Series	94.7%	¤	$ 1,918	8,017	$ 441	4.3	1.9	None	Replace
East Hospital	12	30	89.4%	$ 771	M9937	GE	Ultra Series	94.2%	¤	$ 1,263	7,895	$ 434	2.9	1.1	None	Replace
East Hospital	13	30	89.4%	$ 771	M9937	GE	Ultra Series	94.2%	¤	$ 1,263	7,895	$ 434	2.9	1.1	None	Replace
East Hospital	14	30	89.4%	$ 771	M9937	GE	Ultra Series	94.2%	¤	$ 1,263	7,895	$ 434	2.9	1.1	None	Replace
East Hospital	15 †	30	89.4%	†	-	-	-	†	†	†	†	†	†	†	-	-
East Hospital	16 †	30	89.4%	†	-	-	-	†	†	†	†	†	†	†	-	-
East Hospital	17 †	25	89.4%	†	-	-	-	†	†	†	†	†	†	†	-	-
East Hospital	18 †	25	89.4%	†	-	-	-	†	†	†	†	†	†	†	-	-
East Hospital	19 †	25	89.4%	†	-	-	-	†	†	†	†	†	†	†	-	-
East Hospital	20	30	92.4%	$ 640	M9937	GE	Ultra Series	94.2%	¤	$ 1,263	2,864	$ 158	8.0	4.0	None	Repair
East Hospital	21	50	90.2%	$ 909	M9917	GE	Ultra Series	94.7%	¤	$ 1,918	12,226	$ 672	2.9	1.5	None	Replace
East Hospital	22	50	90.2%	$ 909	M9917	GE	Ultra Series	94.7%	¤	$ 1,918	12,226	$ 672	2.9	1.5	None	Replace
East Hospital	23	40	90.2%	$ 776	M9915	GE	Ultra Series	94.6%	¤	$ 1,636	9,563	$ 526	3.1	1.6	None	Replace
East Hospital	24	50	90.2%	$ 909	M9917	GE	Ultra Series	94.7%	¤	$ 1,918	12,226	$ 672	2.9	1.5	None	Replace
East Hospital	25 §	40	83.5%	$ 776	M9915	GE	Ultra Series	94.6%	¤	$ 1,636	26,062	$ 1,433	1.1	0.6	Replace	-
East Hospital	26 §	40	92.0%	$ 776	M9915	GE	Ultra Series	94.6%	¤	$ 1,636	5,541	$ 305	5.4	2.8	None	Repair
East Hospital	27 §	40	83.5%	$ 776	M9915	GE	Ultra Series	94.6%	¤	$ 1,636	26,062	$ 1,433	1.1	0.6	Replace	-
East Hospital	28	50	92.4%	$ 909	M9917	GE	Ultra Series	94.7%	¤	$ 1,918	6,100	$ 336	5.7	3.0	None	Repair
East Hospital	29 §	50	93.0%	$ 909	M9917	GE	Ultra Series	94.7%	¤	$ 1,918	4,480	$ 246	7.8	4.1	None	Repair
East Hospital	30	30	92.4%	$ 640	M9937	GE	Ultra Series	94.2%	¤	$ 1,263	2,864	$ 158	8.0	4.0	None	Repair

Total Annual kWh Savings	Total Annual Cost Savings	Average Payback	Average Payback
220,642	$ 12,135	4.0	1.9

Notes/Assumptions:

1. Motor list discount is 50%
2. Electricity Cost is $0.055/kWh (includes demand charge)
3. ¤ = *Data not available*
4. § = Motor on Variable Frequency Drive, assumed to be 75% loaded.
5. *Values in **RED** have less than 2 year payback All motors surveyed here will pay for themselves over the expected lifecycle (10 years)*
6. † = Two speed motor, more data necessary for accurate efficiency prediction.
7. No Utility Rebates or Gov Incentives are included in this analysis. Incentives and rebates for new motor purchases will shorten payback periods and are more than likely available.
8. Estimated Repair Cost and Replacement Actual Cost does not include cost of labor.
9. Replacement motor costs are representative, can vary based on brand and vendor
10. Estimated Efficiencies are from Motormaster+ 4.0 unless specified by nameplate data.
11. Motor is assumed to be TEFC unless specified.

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