

Statistics from May 1, 2013 to July 30, 2013

August 2013

Project at a Glance

The City of Dover, NH and Johnson Controls, Inc. entered into a performance contract in September in 2009. The purpose of this contract is to lessen the energy and energy related costs realized by the City of Dover moving forward. The guaranteed savings portion of the contract (ten years) started on November 1 of 2011 and will end on October 31, 2021.

The estimated savings for quarters one, two and three is \$238,109 includes \$203,703 in energy cost avoidance, \$10,670 in operations and maintenance (O&M) cost avoidance, and a future capital cost avoidance of \$25,380. The annual guaranteed energy savings amount escalates by 3% and the O&M savings escalates by 4% each year to compensate for inflation. Total term benefits are \$3,623,746.



New Indoor Pool Covers

This report is designed based upon the quarterly and annual reports that JCl provided to the City, and documents the energy savings of this project. This report covers the second quarter of the second contract year, and runs May 2013 through July 2013.

Contract Info:

CONTRACT #: 9236-0143

CONTRACT YEAR #: 2

ANNUAL GUARANTEED ENERGY SAVINGS: \$280,169

ANNUAL O&M SAVINGS: \$14,227

ANNUAL CAPITAL COST AVOIDANCE: \$33.840

ANNUAL GUARANTEE: \$328,236

CONTRACT TERM: 10-YEARS

TERM GUARANTEED SAVINGS: \$3,623,746

UTILITY COST AVOIDANCE ESCALA-TION RATE: 3.0%

OPERATIONS & MAINTENANCE
(O&M) COST AVOIDANCE ESCALATION RATE: 4.0%

GUARANTEE START DATE: 11/1/2011

GUARANTEE END DATE: 10/31/2021

What's Inside:

This quarterly report will summarize the cost savings realized as part of the infrastructure investments made. Data included:

- FIM* Comparisons by month
- Quarterly Cost Savings

- Savings Per Facility
- Savings by Facility and FIM*
- Aggregate Monthly FIM* Savings
- Energy Equivalent Savings
- * FIM = Facility Improvement Measures

Contents:

ANNU	IAL COST SVGS	2
Монт	THLY COMPARRISON	3
GUAR	ENTEED SAVINGS	4
GUAR	ENTEED SAVINGS	5
SAVIN	igs By Facility	6
SAVIN	IGS BY FACILITY/FIM	7
Aggr	REGATE SAVINGS	8
Emiss	IONS EQUIVALENTS	9
ABOU	T DOVER	10

Annual Cost Savings Summary

	Guaranteed	Guaranteed	Guaranteed	Total Guaran-		
Guarantee	Energy Cost	O&M Cost	Future Capital	teed Cost Avoid-	Verified Annual	
Period	Avoidance	Avoidance	Cost Avoidance	ance	Cost Avoidance	Variance
Year 1	\$271,943	\$13,680	\$33,840	\$319,463	\$317,642	(\$1,821)
Year 2	\$280,169	\$14,227	\$33,840	\$328,236		
Year 3	\$288,644	\$14,796	\$33,840	\$337,280		
Year 4	\$297,375	\$15,388	\$33,840	\$346,603		
Year 5	\$306,371	\$16,004	\$33,840	\$356,214		
Year 6	\$315,638	\$16,644	\$33,840	\$366,122		
Year 7	\$325,186	\$17,310	\$33,840	\$376,336		
Year 8	\$335,023	\$18,002	\$33,840	\$386,865		
Year 9	\$345,157	\$18,722	\$33,840	\$397,719		
Year 10	\$355,598	\$19,471	\$33,840	\$408,909		
Total	\$3,121,103	\$164,244	\$338,400	\$3,623,746	\$317,642	N/A

FIM# **FIM Description** 1 Lighting Fixture Retrofit Lighting Fixtures 2 Lighting Fixture Control Lighting Controls (McConnell Ctr) 3 Building Envelope Weatherization 4.1 EMS Building Controls 4.2 EMS Building Controls/Optimal Start 4.3 AHU Upgrade VFD on fan 4.4 Pool Dehumidification EMS & VFDs 4.5 Repair Snow Melt Sensor 6 Water Conservation 9 Vending Machine Controllers 10 Pool Covers 11 Ice Arena Upgrades 12 Power Factor Correction 13 Energy Efficient Transformers E.E. Transformers (Ice Arena) 14 Aeration Blower Upgrade 15 Boiler Replacement

Savings are provided on a monthly basis for Quarter 1 of year two of the JCI Contract, in the adjacent table. The guaranteed savings per Facility **Improvement Measure** (FIM) represents the amount per FIM that adds up to the total overall annual guarantee. FIM savings are not guaranteed individually; the savings guarantee reflects the whole project. Therefore deficiencies from one FIM can be overcome by another FIM to result in overall project savings

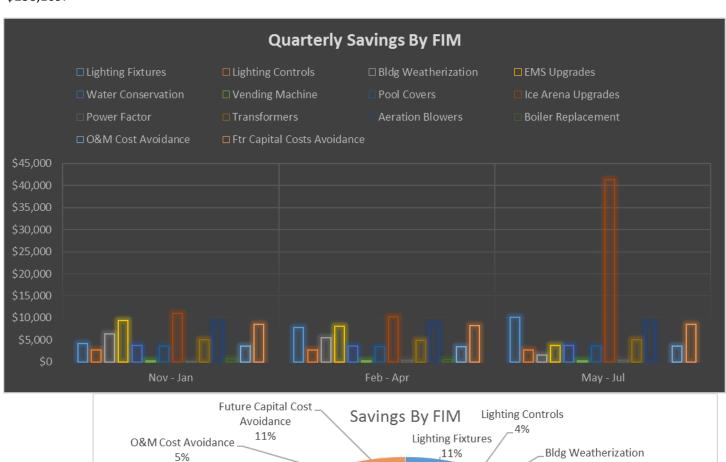
FIM Comparisons by Month

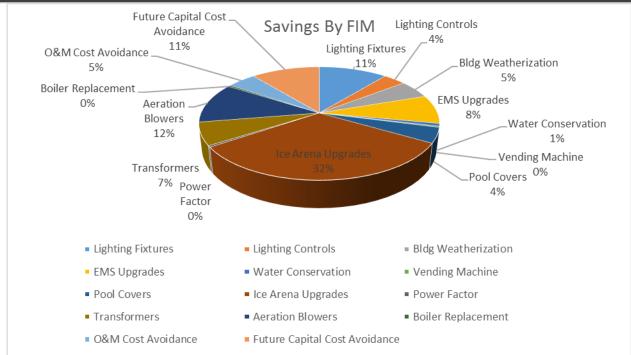
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	Contract Year To Date Sav- ings	\$34,088	\$10,556	\$14,899	\$31,522	\$14,550	\$964	\$13,623	\$97,890	\$7,405	\$18,940	\$34,444	\$1,288	\$280,169	\$14,227	\$33,840	\$328,236
	Total Con- tract YTD Savings	\$25,759	\$8,267	\$13,558	\$21,202	\$11,246	\$748	\$10,504	\$62,709	\$869	\$14,965	\$26,672	\$1,182	\$197,681	\$10,638	\$25,333	\$233,652
	Oct																TBD
δ	Sept																TBD
	Aug																TBD
	ylut	\$2,771 \$3,024 \$3,286 \$3,760	\$912	\$544	\$1,119 \$1,090	\$1,277	\$85	\$1,154 \$1,193	\$17,74 \$16,89 7	\$148	\$1,647 \$1,695 \$1,647 \$1,695	\$2,936 \$3,019 \$2,936 \$3,019		\$30,64 4	\$1,208	\$2,774 \$2,866 \$2,774 \$2,866	\$34,71 8
03	June	\$3,286	\$912	\$142	\$1,119	\$1,236	\$82	\$1,154	\$17,74 7	\$181	\$1,647	\$2,936		\$20,58 \$30,44 \$30,64 2 1 4	\$1,169	\$2,774	\$24,65 \$34,38 \$34,71 6 4 8
	Мау	\$3,024	\$942	\$956	\$1,495	\$1,277	\$85	\$1,193	\$3,232 \$6,764	\$133	\$1,695	\$3,019		\$20,58 2	\$1,208	\$2,866	\$24,65 6
	Apr	\$2,771	\$912	\$1,394	\$1,910	\$1,236 \$1,277 \$1,236 \$1,277	\$82	\$1,154	\$3,232	\$130		\$2,936	\$64	\$17,468	\$1,169	\$2,774	\$21,411
Q 2	⊠ Aar	\$2,687	\$942	\$1,994	\$3,093	\$1,277	\$85	\$1,193	\$4,521	\$133	\$1,695	\$3,019	\$207	\$20,844 \$17,468	\$1,208 \$1,169 \$1,208 \$1,169 \$1,208	\$2,866	2 3 \$24,918 \$21,411
	Feb	\$2,381	\$851	\$2,132	\$3,120	\$1,153	\$77	\$1,077	\$2,486	\$123	\$1,549	\$2,769	\$232	\$17,95 1	\$1,091	\$2,681	\$21,72 3 \$
	Jan	\$2,544 \$2,381	\$942	\$2,483	\$3,577	\$1,277	\$85	\$1,193	\$4,934 \$2,486	\$21	\$1,695 \$1,549	\$3,019	\$237	\$22,00 7	\$1,169 \$1,208 \$1,208 \$1,091	\$2,774 \$2,866 \$2,866 \$2,681	\$26,08 \$21,72 1 3
Q1	Dec		\$942	\$2,142	\$3,240	\$1,277	\$85	\$1,193		\$0	\$1,695	\$3,019	\$227		\$1,208	\$2,866	\$22,30 6
	Nov	\$2,663 \$2,643	\$912	\$1,771 \$2,142	\$2,558 \$3,240	\$1,236	\$82	\$1,154 \$1,193	\$4,365 \$1,769	\$0	\$1,647 \$1,695	\$2,936 \$3,019	\$215	\$19,53 \$18,23 9 2	\$1,169	\$2,774	\$23,48 \$22,30 2 6
	ਜ ™ #	Lighting Fixtures	Lighting Controls	Bldg Weatherization	EMS Upgrades	Water Conservation \$1,236 \$1,277 \$1,277 \$1,153	Vending Machine	Pool Covers	Ice Arena Upgrades	Power Factor	Transformers	Aeration Blowers	Boiler Replacement	ENERGY COST SAVINGS	O&M Cost Avoidance	Future Capital Cost Avoidance	TOTAL COST SAVINGS
														ENE	O&I	Futt	T0T

Quarterly Cost Savings

Savings realized by the project quarter 3 of year two totals 621,224 kWh & 1356 kW (\$79,931), 8,560 MMBTU's (\$115,212) and 886 kGals of water/ sewer savings (\$10,078).

The total year 2, to date savings are broken down by FIM on this page and the next. They amount to \$238,109.





Page 4

Statistics from May 1, 2013 to July 30, 2013

Quarterly Savings By FIM

		Ele	Electrical Savings	gs	Thermal Savings	Savings	Water Savings	avings	Total
FIM #	Description	KW	kWh	❖	MMBtu	❖	kgal	\$	\$ Savings
1	Lighting Fixtures	1,070	188,591	\$27,724	-\$171	-\$2,357	\$0	\$0	\$25,367
2	Lighting Controls	233	68'836	\$8,321	\$0	\$0	\$0	\$0	\$8,321
8	Bldg Weatherization	0	3,707	\$422	\$809	\$11,597	\$0	\$0	\$12,019
4	EMS Upgrades	0	64,844	\$7,255	\$779	\$11,699	\$0	\$0	\$18,954
9	Water Conservation	0	0	\$0	\$101	\$1,747	\$838	\$9,529	\$1,747
6	Vending Machine	0	6,319	\$748	\$0	\$0	\$0	\$0	\$748
10	Pool Covers	0	34,992	\$3,767	\$420	\$6,218	\$48	\$549	\$9,985
11	Ice Arena Upgrades	-758	-52,735	-\$10,990	\$6,555	\$85,334	\$0	\$0	\$74,344
12	Power Factor	30	6,688	\$948	\$0	\$0	\$0	\$0	\$948
13	Transformers	239	112,971	\$15,002	\$0	\$0	\$0	\$0	\$15,002
14	Aeration Blowers	543	186,008	\$26,736	\$0	\$0	\$0	\$0	\$26,736
15	Boiler Replacement	0	0	\$0	¢ 95	\$975	\$0	\$0	\$975
Energy Totals	tals	1,356	621,224	\$79,931	8,560	\$115,212	988	\$10,078	\$203,703
lce Aerna	Ice Aerna Ice Max Cost								-\$1,644
O&M Cost	O&M Cost Avoidance								\$10,670
Future Cap	Future Capital Cost Avoidance								\$25,380
TOTAL CO	TOTAL COST SAVINGS	1,356	621,224	\$79,931	8,560	\$115,212	988	\$10,078	\$238,109

Thermal Savings consist of Gas (therms), Oil (gallons), (gallons).

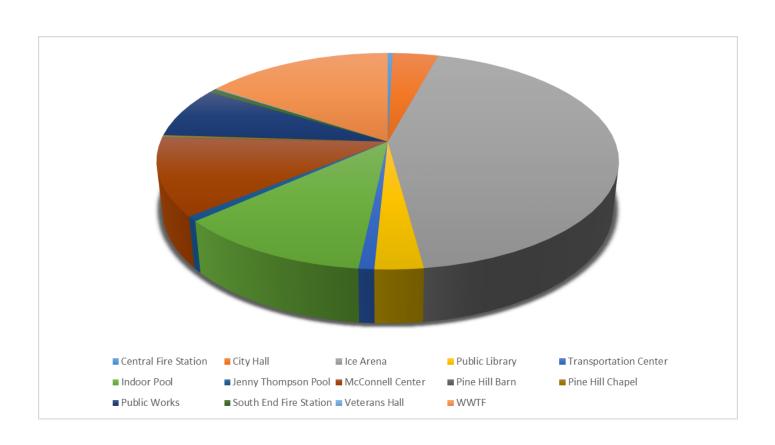
In order to provide a basis for comparison, these have all been reported in MMBtu. Conversion factors used in assembling this report are listed below:

Natural Gas: 1 therm = 0.1 MMBtu

savings from Natural and Propane

Savings Per Facility

	Elect	rical Savings	5	Thermal S	Savings	Water Sa	evings	Total
Facility Location	KW	kWh	\$	MMBtu	\$	kgal	\$	\$ Savings
Central Fire Station	0	146	19	41	638	16	176	\$833
City Hall	113	18,538	2,784	141	2,427	227	2,579	\$7,790
Ice Arena	-533	25,178	-1,166	6,807	88,618	179	2,036	\$89,489
Public Library	77	25,693	2,766	137	2,016	95	1,086	\$5,868
Transportation Center	0	14,929	1,878	0	0	0	0	\$1,878
Indoor Pool	28	92,754	10,234	762	11,278	210	2,387	\$23,898
Jenny Thompson Pool	0	0	0	19	263	106	1,201	\$1,464
McConnell Center	616	126,585	18,497	343	4,988	0	0	\$23,484
Pine Hill Barn	0	0	0	19	326	0	0	\$326
Pine Hill Chapel	0	17	3	34	575	5	56	\$633
Public Works	428	102,169	13,467	144	1,675	42	481	\$15,623
South End Fire Station	0	71	9	71	1,279	7	77	\$1,364
Veterans Hall	0	0	0	14	250	0	0	\$250
WWTF	629	215,622	30,984	53	906	0	0	\$31,890
			\$79,47		\$115,23			
Total	1,356	621,700	5	8,582	7	887	\$10,077	\$204,788



Statistics from May 1, 2013 to July 30, 2013 $\,$

Savings by Facility and FIM

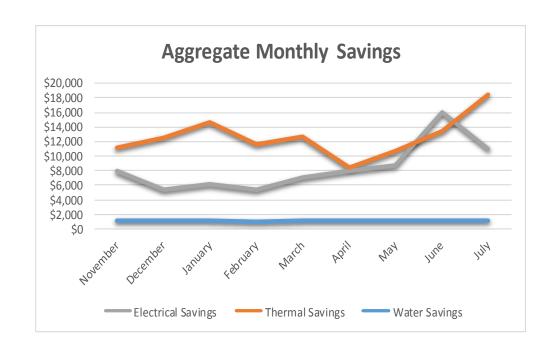
		Lighting Fixtures	Lighting Controls	Bldg Weatherization	EMS Upgrades	Water Conservation	Vending Machine	Pool Covers	Ice Arena Upgrades	Power Factor	Transformers	Aeration Blowers	Boiler Replacement	Totals/
	Facility Location													Building
	Central Fire Station	\$0	\$0	\$617	\$0	\$216	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$833
	City Hall	\$2,250	\$743	\$803	\$1,577	\$2,844	\$252	\$0	\$0	\$0	\$0	\$0	\$0	\$8,470
	Ice Arena	\$4,361	\$1,065	\$3,782	\$0	\$2,552	\$245	\$0	\$74,351	\$948	\$2,186	\$0	\$0	\$89,489
	Public Library Transportation Cen-	\$2,647	\$737	\$304	\$785	\$1,200	\$0	\$0	0\$	0\$	0\$	\$0	\$975	\$6,647
	ter	\$0	0\$	\$0	\$1,878	\$0	\$0	\$0	0\$	\$0	\$0	\$0	\$0	\$1,878
	Indoor Pool	\$928	\$21	996\$	\$9,083	\$2,246	\$121	\$10,533	0\$	0\$	0\$	\$0	\$0	\$23,897
	Pool	0\$	\$0	\$0	\$0	\$1,464	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,464
	McConnell Center	\$8,215	\$3,512	\$875	\$5,036	\$0	\$0	\$0	\$0	\$0	\$5,846	\$0	\$0	\$23,483
Þ	Pine Hill Barn	\$0	\$0	\$0	\$326	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$326
uue .	Pine Hill Chapel	\$0	\$0	\$400	\$173	\$61	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$633
7	Public Works	\$7,986	\$2,243	\$1,836	\$95	\$569	\$130	\$0	\$0	\$0	\$2,744	\$0	\$0	\$15,602
	tion	\$0	\$0	\$1,261	\$0	\$104	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,364
	Veterans Hall	0\$	\$0	\$250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250
	WWTF	\$0	\$0	\$927	\$0	\$0	\$0	\$0	\$0	\$0	\$4,226		\$0	\$31,889
	Total FIM	\$26,386	\$8,321	\$12,020	\$18,953	\$11,254	\$748	\$10,533	\$74,351	\$948	\$15,002	\$26,7 36	\$975	\$206,225

Aggregate Monthly Savings

		Ele	ctrical Savir	ngs	Thermal	Savings	Water 9	Savings	Total
Month	Year	KW	kWh	\$	MMBtu	\$	kgal	\$	\$ Savings
November	2012	154	61,057	\$8,034	823	\$11,208	97	\$1,104	\$20,346
December	2012	132	37,968	\$5,414	915	\$12,511	100	\$1,141	\$19,066
January	2013	90	48,052	\$6,182	1,075	\$14,681	100	\$1,141	\$22,004
February	2013	66	42,769	\$5,379	841	\$11,542	91	\$1,031	\$17,952
March	2013	105	55,148	\$7,093	926	\$12,610	100	\$1,141	\$20,844
April	2013	133	61,769	\$7,922	618	\$8,441	97	\$1,104	\$17,467
May	2013	198	64,446	\$8,715	803	\$10,726	100	\$1,141	\$20,582
June	2013	227	128,737	\$15,938	1,016	\$13,398	97	\$1,104	\$30,440
July	2013	152	88,386	\$11,029	1,407	\$18,475	100	\$1,141	\$30,645
August	2013								TBD
September	2013								TBD
October	2013								TBD
Contract Year	To Date	1,257	588,332	\$75,706	8,424	\$113,592	882	\$10,048	\$199,346

THIS PAGE

CONTAINS THE
TOTAL MONTHLY
ENERGY UNIT
SAVINGS AND
ASSOCIATED
DOLLAR COST
SAVINGS FOR ALL
FIMS.



Contract Q1 Equivalency Savings

Based Upon 700 metric tons of CO2, the following equivalencies have been developed:



Dover Kirist

QUARTERLY REPORT

Prepared By:

Department of Planning and Community Development Municipal Building 288 Central Avenue Dover, NH 03820

Phone: 603-516-6008 c.parker@dover.nh.gov www.dover.nh.gov

Dover's Strategic Priorities: Dover's Focus Areas:

- Obtain a financially-and environmentally- reasonable permit for the wastewater treatment plant
- Increase non-property-tax revenue sources and control expenses
- Enhance communication to all stakeholders to engender public trust
- Foster Economic Development

- Public Education
- Economic Development
- Public Safety
- Public Infrastructure
- Fiscal Stewardship



Dover's Core Values:

Customer-Focused Service — We engage our customers, with a focus on listening to and supporting their needs, anticipating and delivering high quality services and ensuring their satisfaction.

Integrity – We conduct ourselves at all times in a manner that is ethical, legal and professional, with the highest degree of honesty, respect and fairness.

Innovation – We develop creative solutions and share leading practices that enhance the value of services provided for our customers.

Accountability – We promote openness and transparency in our operations ensuring that we are accountable for our actions at all times.

Stewardship — We serve as trusted stewards of the public's financial, environmental, social and physical resources always seeking to responsibly utilize, conserve and sustain for current and future generations.

Dover Has:

30,168 People

28.87 square miles of land

50 miles of river frontage

An average elevation of 80'

6 Wards

Avg # of residents per ward: 5,000

Over 900 fire hydrants

Over 130 miles of public streets

Over 70 acres of parkland

Three elementary schools, one middle school, one high school

Services: Full emergency services (police, fire and ambulance); city water and sewer; public and private solid waste disposal; a recycling program; electricity and natural gas through utilities.

