

Energy Improvements Performance Contract



QUARTERLY REPORT

Statistics from November 1, 2012 to January 31, 2013

February 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 quarter one is \$78,274 includes \$67,901 in energy cost avoidance, \$3,557 in operations and maintenance (O&M) cost avoidance, and a future capital cost avoidance of \$8,460. 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 Electric Chiller Installed at the Ice Arena

This report is designed based upon the quarterly and annual reports that JCI provided to the City, and documents the energy savings of this project. This report covers the first quarter of the second contract year, and runs November 2012 through January 2013.

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

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 ESCALATION 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

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Annual Cost Savings Summary

Guarantee Period	Guaranteed Energy Cost Avoidance	Guaranteed O&M Cost Avoidance	Guaranteed Future Capital Cost Avoidance	Total Guaranteed Cost Avoidance	Verified Annual 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

Statistics from November 1, 2012 to January 31, 2013

FIM Comparisons by Month

FIM #	Q1			Q2			Q3			Q4			Total Contract YTD Savings	Contract Year To Date Savings
	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct		
Lighting Fixtures	\$2,663	\$2,643	\$2,544										\$7,850	\$34,088
Lighting Controls	\$912	\$942	\$942										\$2,796	\$10,556
Bldg Weatherization	\$1,771	\$2,142	\$2,483										\$6,396	\$14,899
EMS Upgrades	\$2,558	\$3,240	\$3,577										\$9,375	\$31,522
Water Conservation	\$1,236	\$1,277	\$1,277										\$3,790	\$14,550
Vending Machine	\$82	\$85	\$85										\$252	\$964
Pool Covers	\$1,154	\$1,193	\$1,193										\$3,540	\$13,623
Ice Arena Upgrades	\$4,365	\$1,769	\$4,934										\$11,068	\$97,890
Power Factor	\$0	\$0	\$21										\$21	\$7,405
Transformers	\$1,647	\$1,695	\$1,695										\$5,037	\$18,940
Aeration Blowers	\$2,936	\$3,019	\$3,019										\$8,974	\$34,444
Boiler Replacement	\$215	\$227	\$237										\$679	\$1,288
ENERGY COST SAVINGS	\$19,539	\$18,232	\$22,007										\$59,778	\$280,169
O&M Cost Avoidance	\$1,169	\$1,208	\$1,208										\$3,585	\$14,227
Future Capital Cost Avoidance	\$2,774	\$2,866	\$2,866										\$8,506	\$33,840
TOTAL COST SAVINGS	\$23,482	\$22,306	\$26,081	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	\$71,869	\$328,236

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Quarterly Cost Savings

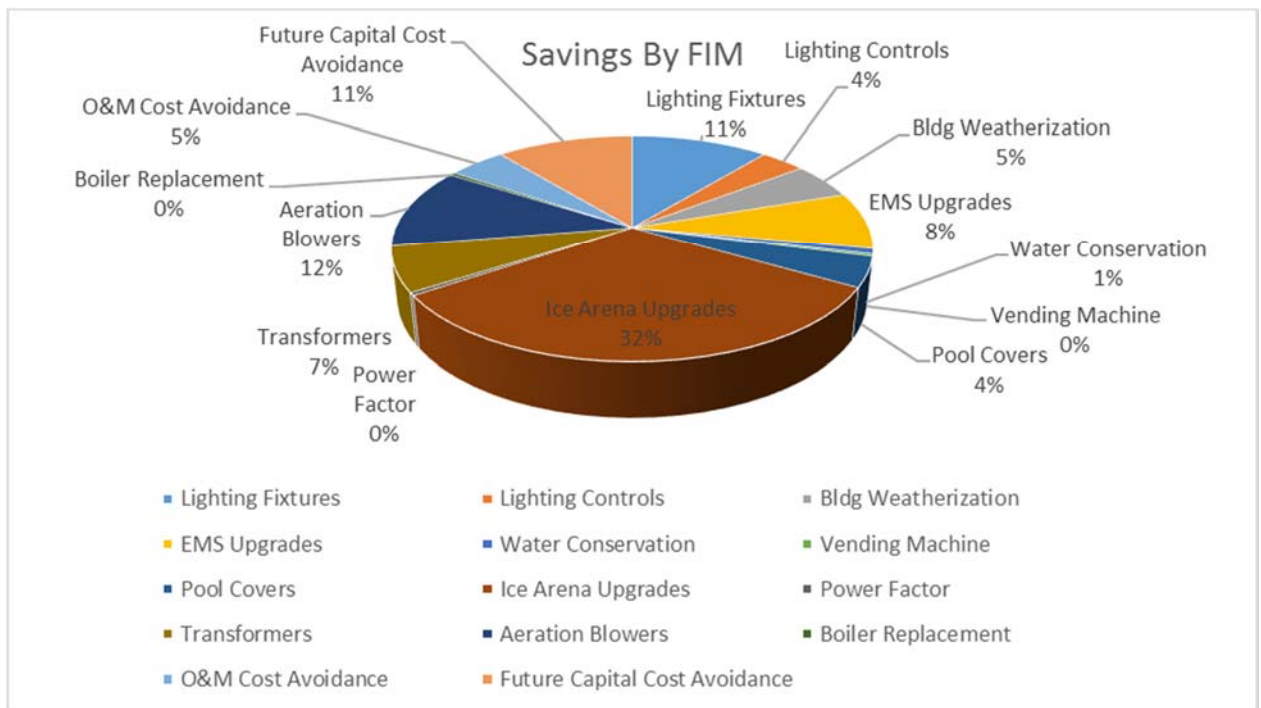
Savings realized by the project quarter 1 of year two totals 207,075 kWh & 452 kW (\$26,664), 2,853 MMBTU's (\$38,404) and 295kGals of water/ sewer savings (\$3,359).

The total year 2, quarter 1 savings are broken down by FIM on this page and the next. They amount to \$78,274.



Thermal Savings consist of savings from Natural Gas (therms), Oil (gallons), and Propane (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
- Oil: 1 gallon = 0.139 MMBtu
- Propane: 1 gallon = 0.0916 MMBtu



Statistics from November 1, 2012 to January 31, 2013

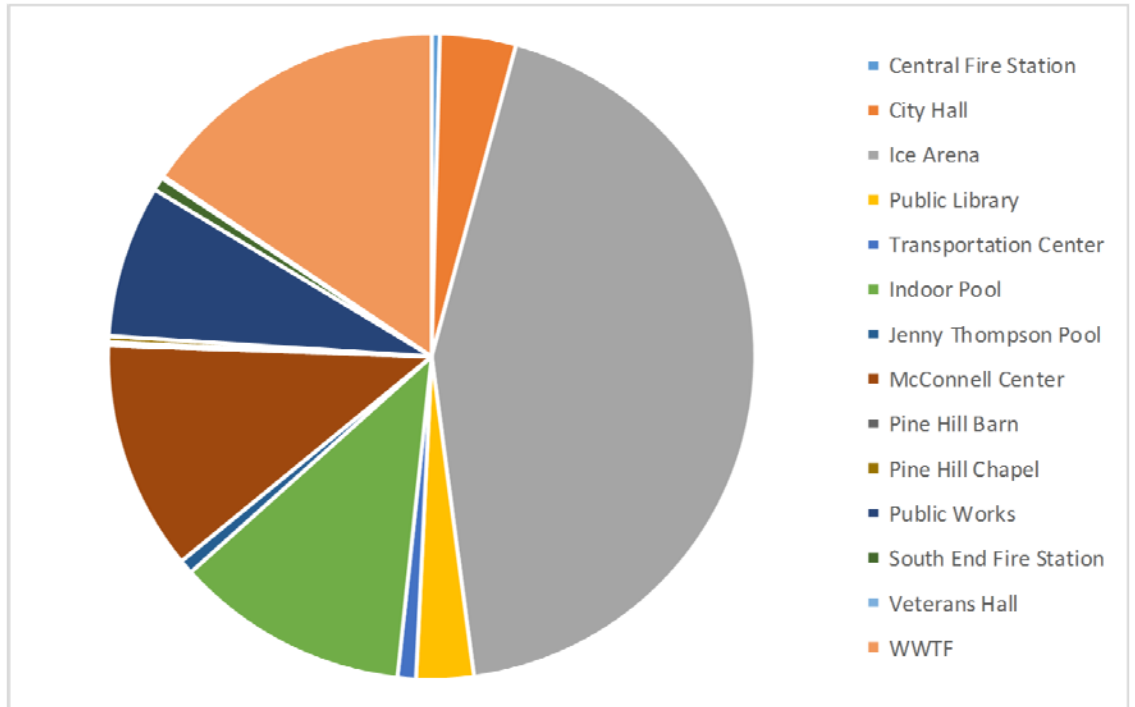
Quarterly

FIM #	Description	Electrical Savings			Thermal Savings		Water Savings		Total \$ Savings
		KW	kWh	\$	MMBtu	\$	kgal	\$	
1	Lighting Fixtures	357	62,864	\$9,241	-\$57	-\$786	\$0	\$0	\$8,456
2	Lighting Controls	78	23,280	\$2,774	\$0	\$0	\$0	\$0	\$2,774
3	Bldg Weatherization	0	1,236	\$141	\$270	\$3,866	\$0	\$0	\$4,006
4	EMS Upgrades	0	21,615	\$2,418	\$260	\$3,900	\$0	\$0	\$6,318
6	Water Conservation	0	0	\$0	\$34	\$582	\$279	\$3,176	\$582
9	Vending Machine	0	2,106	\$249	\$0	\$0	\$0	\$0	\$249
10	Pool Covers	0	11,664	\$1,256	\$140	\$2,073	\$16	\$183	\$3,328
11	Ice Arena Upgrades	-253	-17,578	-\$3,663	\$2,185	\$28,445	\$0	\$0	\$24,781
12	Power Factor	10	2,229	\$316	\$0	\$0	\$0	\$0	\$316
13	Transformers	80	37,657	\$5,001	\$0	\$0	\$0	\$0	\$5,001
14	Aeration Blowers	181	62,003	\$8,912	\$0	\$0	\$0	\$0	\$8,912
15	Boiler Replacement	0	0	\$0	\$22	\$325	\$0	\$0	\$325
Energy Totals		452	207,075	\$26,644	2,853	\$38,404	295	\$3,359	\$67,901
Ice Arena Ice Max Cost									-\$1,644
O&M Cost Avoidance									\$3,557
Future Capital Cost Avoidance									\$8,460
TOTAL COST SAVINGS		452	207,075	\$26,644	2,853	\$38,404	295	\$3,359	\$78,274

Energy Improvements Performance Contract

Savings Per Facility

Facility Location	Electrical Savings			Thermal Savings		Water Savings		Total \$ Savings
	KW	kWh	\$	MMBtu	\$	kgal	\$	
Central Fire Station	0	49	6	14	213	5	59	\$278
City Hall	38	6,179	928	47	809	76	860	\$2,597
Ice Arena	-178	8,393	-389	2,269	29,539	60	679	\$29,830
Public Library	26	8,564	922	46	672	32	362	\$1,956
Transportation Center	0	4,976	626	0	0	0	0	\$626
Indoor Pool	9	30,918	3,411	254	3,759	70	796	\$7,966
Jenny Thompson Pool	0	0	0	6	88	35	400	\$488
McConnell Center	205	42,195	6,166	114	1,663	0	0	\$7,828
Pine Hill Barn	0	0	0	6	109	0	0	\$109
Pine Hill Chapel	0	6	1	11	192	2	19	\$211
Public Works	143	34,056	4,489	48	558	14	160	\$5,208
South End Fire Station	0	24	3	24	426	2	26	\$455
Veterans Hall	0	0	0	5	83	0	0	\$83
WWTF	210	71,874	10,328	18	302	0	0	\$10,630
Total	452	207,233	2	2,861	\$38,412	296	\$3,359	\$68,263



Statistics from November 1, 2012 to January 31, 2013

Savings by Facility and FIM

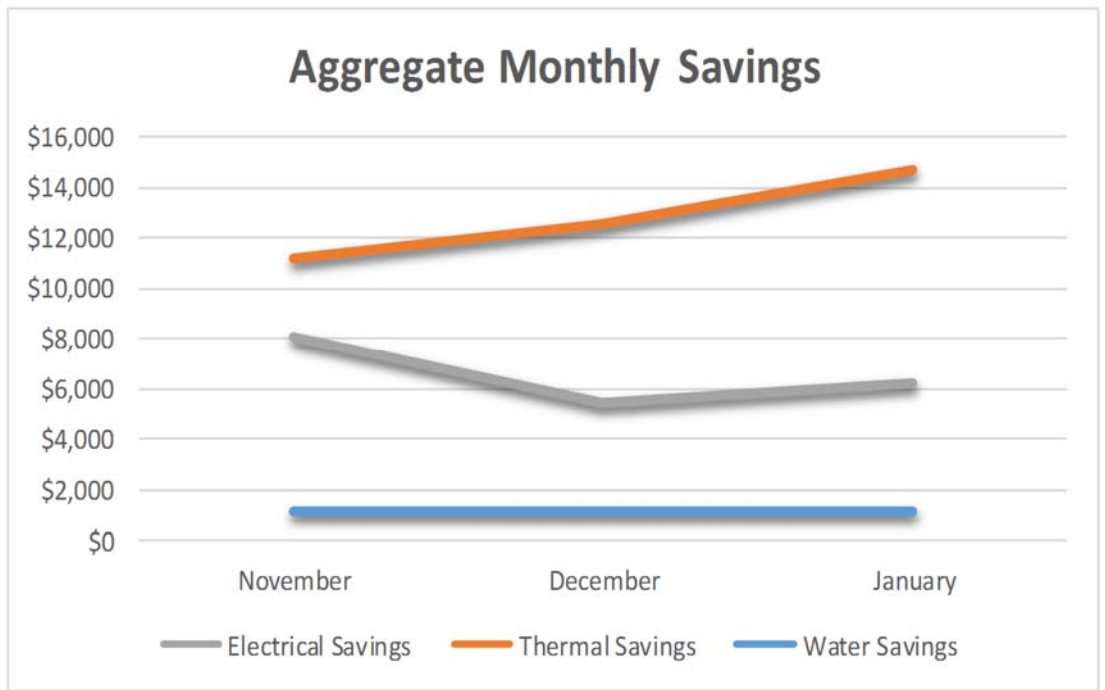
Facility Location	Lighting Fixtures	Lighting Controls	Bldg Weatherization	EMS Upgrades	Water Conservation	Vending Machine	Pool Covers	Ice Arena Upgrades	Power Factor	Transformers	Aeration Blowers	Boiler Replacement	Totals/ Building
Central Fire Station	\$0	\$0	\$206	\$0	\$72	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$278
City Hall	\$750	\$248	\$268	\$526	\$948	\$84	\$0	\$0	\$0	\$0	\$0	\$0	\$2,823
Ice Arena	\$1,454	\$355	\$1,261	\$0	\$851	\$82	\$0	\$24,784	\$316	\$729	\$0	\$0	\$29,830
Public Library	\$882	\$246	\$101	\$262	\$400	\$0	\$0	\$0	\$0	\$0	\$0	\$325	\$2,216
Transportation Center	\$0	\$0	\$0	\$626	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$626
Indoor Pool	\$309	\$7	\$322	\$3,028	\$749	\$40	\$3,511	\$0	\$0	\$0	\$0	\$0	\$7,966
Jenny Thompson Pool	\$0	\$0	\$0	\$0	\$488	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$488
McConnell Center	\$2,738	\$1,171	\$292	\$1,679	\$0	\$0	\$0	\$0	\$0	\$1,949	\$0	\$0	\$7,828
Pine Hill Barn	\$0	\$0	\$0	\$109	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$109
Pine Hill Chapel	\$0	\$0	\$133	\$58	\$20	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$211
Public Works	\$2,662	\$748	\$612	\$32	\$190	\$43	\$0	\$0	\$0	\$915	\$0	\$0	\$5,201
South End Fire Station	\$0	\$0	\$420	\$0	\$35	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$455
Veterans Hall	\$0	\$0	\$83	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$83
WWTF	\$0	\$0	\$309	\$0	\$0	\$0	\$0	\$0	\$0	\$1,409	\$8,912	\$0	\$10,630
Total FIM	\$8,795	\$2,774	\$4,007	\$6,318	\$3,751	\$249	\$3,511	\$24,784	\$316	\$5,001	\$8,912	\$325	\$68,742

Energy Improvements Performance Contract

Aggregate Monthly Savings

Month	Year	Electrical Savings			Thermal Savings		Water Savings		Total \$ Savings
		KW	kWh	\$	MMBtu	\$	kgal	\$	
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								TBD
March	2013								TBD
April	2013								TBD
May	2013								TBD
June	2013								TBD
July	2013								TBD
August	2013								TBD
September	2013								TBD
October	2013								TBD
Contract Year To Date		376	147,077	\$19,630	2,813	\$38,400	297	\$3,386	\$61,416

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



Statistics from November 1, 2012 to January 31, 2013

Contract Q1 Equivalency Savings

Based Upon 233 metric tons of CO₂, the following equivalencies have been developed:

Annual greenhouse gas emissions from



CO₂ emissions from



Carbon sequestered by





Dover: First in New Hampshire, First With You

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.

