



Lorena Wise
Oregon Department of Energy
625 Marion St. NE
Salem, OR 97301-3737

Dear Ms. Wise:

Johnson Controls is very pleased to submit this response to your ESCO Pre-Qualification RFQ # ODE-09-16 regarding energy performance contracting services for public entities throughout the State of Oregon. You will find a fully compliant and comprehensive response outlining our organization, background, capabilities and interest. Projects that result from our selection as a pre-qualified ESCO will be implemented by professionals within our full-service Branch Office system, backed by regional and corporate management and support staff from other Johnson Controls offices as necessary. With more than \$38 billion in annual revenue, we possess the financial strength and technical experience to minimize risk for our customers and maximize their long-term investment.

Johnson Controls has implemented more than 2,500 performance contracts over the past 26 years. We have nearly 800 active performance contracts throughout North America involving more than \$4.6 billion in guarantees. We are also a world-class leader in environmental sustainability, as we frequently employ biomass, geothermal, solar, wind and other renewable sources as energy supply options for our customers. Johnson Controls takes responsibility for the design, engineering, installation, commissioning, operation and maintenance of these renewable energy solutions. We can also guarantee the energy production, which reduces risk for our customers while increasing their energy security.

As requested in the RFQ, I hereby certify that Johnson Controls has not discriminated and will not discriminate against minority, women or emerging small business enterprises in obtaining any required subcontracts. In addition, Johnson Controls will be bound by and comply with ORS 279C.800 through 279C.870 relative to prevailing wage rates and other requirements, and as provided in the administrative rules of the Commissioner of the Oregon Bureau of Labor and Industries ("BOLI"), and in the State of Oregon General Conditions for Public Improvement Contracts.

On behalf of the entire Johnson Controls organization, I look forward to helping the Oregon Department of Energy build a strong partnership with Johnson Controls. If you have any questions or concerns, please contact me at the number listed below.

Sincerely,

David S Bell
Senior Account Executive, Local Government
Johnson Controls Inc.
4011 SE International Way, Suite 605
Milwaukie, OR 97222
(503) 305-2027
David.S.Bell@jci.com





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Attachments

- Attachment A: Request and Authorization to Release Information, Release of Liability/Claims, and Agreement Not to Sue
- Attachment B: Resumes of Key Personnel
- Attachment C: Sample Measurement & Verification Reports
- Attachment D: Sample Technical Energy Audit
- Attachment E: Sample Project Development Plan



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B. ESCO Profile

1. General Firm Information

Firm Name: Johnson Controls, Inc.
Mailing Address: 5757 N. Green Bay Ave., P.O. Box 591, Milwaukee, WI 53201-0591
Physical Address: 5757 N. Green Bay Ave., Glendale, WI 53209
Names, Titles and Phone Numbers of two principal contact persons:
a. Reggie Ingram, Regional Higher Education Executive (971) 253-9369
b. Mark Martinez, Higher Education Sales Executive (913) 307-4259

Submittal is for: Parent Company

List any Division or Branch Offices that will participate in the development of the statement of qualification, in its evaluation process, and/or in the conduct of any Services.

Building Efficiency Headquarters

Johnson Controls, Inc.
507 E. Michigan Street
Milwaukee, Wisconsin 53202

Oregon Branch Office

Johnson Controls, Inc.
4011 SE International Way, Suite 605
Milwaukie, OR 97222

Name and Address of Parent Company (if applicable)

Not applicable. Johnson Controls Inc. is the parent company.

Former Name(s) of Firm (if applicable)

See response to 8b.

Oregon CCB Number

65320

2. Date Prepared

March 18, 2009

3. Type of Entity

Corporation Sole Proprietorship LLC
 Partnership Joint Venture Other (specify)



4. Federal Employer Identification Number:

39-0380010

5. Year Firm Established:

Johnson Controls was founded in 1885 in Milwaukee, WI.

6. Five-year summary of contract dollar amounts of energy related services previews:

2008: \$ 778 million

2007: \$ 545 million

2006: \$ 529 million

2005: \$ 407 million

2004: \$ 365 million

These figures reflect our North American performance contracting volume per year. Johnson Controls has approximately 800 active performance contracts throughout North America involving more than \$4.6 billion in guarantees.

7. Corporate Background

a. **Years Under Present Name.** Johnson Controls has been in business under its present business for 35 years.

b. **Former Names.** Indicate all other names by which your organization has been known and the length of time known by each name.

Name: Johnson Electric Service Company Years: 17

Name: Johnson Service Company Years: 73



c. **Years in Energy Business.** Johnson Controls has been providing energy-efficiency related services for 124 years and has performance contracting services for 26 years.

d. **Number of Contracts.** Johnson Controls has implemented more than 2,500 performance contracts throughout North America since this became a dedicated business in 1983. The State and Local Government division currently manages 201 performance contracting projects, with total guarantees of \$950 million.

e. **State Qualification.** Johnson Controls is legally qualified to do business in all 50 states.

f. **Lawsuit Involvement.** (See answer to item i. below)



- g. **Construction Arbitration Involvement.** (See answer to item i. below)
- h. **National Labor Relations Board or Similar Involvement.** (See answer to item i. below)

i. **OSHA-Type Proceedings.**

As a company with over \$38 billion in annual sales and facilities around the world, Johnson Controls is involved in litigation or disputes concerning various aspects of the operation of the company. Our Form 10-K filing (available at www.johnsoncontrols.com) identifies litigation that is material to the financial condition of the company. Additional information concerning specific litigation can be obtained by contacting Gus Koutsouvas, Group Counsel Building Efficiency Americas, at 414-524-4051.

- j. **Bankruptcy Involvement.** Has your firm, or any of its parents or subsidiaries, ever had a bankruptcy petition filed in its name, voluntarily or involuntarily? ____Yes X No.

8. **Financial Information**

- a. **Statement of Financial Conditions.** Excerpts from our 2008 Form 10-K filing are included on the following pages, which satisfy the Statement of Financial Conditions requirement. Complete financial information can be found on www.johnsoncontrols.com. The following firm prepared our Form 10-K report:

PricewaterhouseCoopers LLP, 100 E. Wisconsin Ave., Suite 1800, Milwaukee WI 53202
Telephone (414) 212-1600



ITEM 6. SELECTED FINANCIAL DATA

The following selected financial data reflects the results of operations, balance sheet data, and common share information for the three years ended September 30, 2004 through September 30, 2008 (in millions, except per share data and number of common shares and shareholders).

	Year ended September 30,				
	2008	2007	2006 (2)	2005	2004
OPERATING RESULTS					
Net sales	\$ 58,082	\$ 54,624	\$ 52,215	\$ 57,470	\$ 54,893
Segment income (3)	2,077	1,851	1,628	1,526	1,158
Income from continuing operations	979	1,295	1,023	757	767
Net income	979	1,253	1,028	809	313
Income per share from continuing operations (4)					
Basic	\$ 1.66	\$ 2.19	\$ 1.77	\$ 1.32	\$ 0.50
Diluted	1.64	2.15	1.75	1.30	0.49
Earnings per share (4)					
Basic	\$ 1.65	\$ 2.18	\$ 1.76	\$ 1.31	\$ 0.49
Diluted	1.63	2.12	1.74	1.28	0.47
Return on average shareholders' equity (5)	11%	18%	12%	13%	10%
Capital expenditures	\$ 857	\$ 828	\$ 711	\$ 590	\$ 317
Depreciation and amortization	784	743	705	640	594
Number of employees	142,000	142,000	135,000	144,000	130,000
FINANCIAL POSITION					
Working capital (6)	\$ 1,225	\$ 1,041	\$ 1,597	\$ 392	\$ 350
Total assets	24,083	24,056	21,070	19,144	14,658
Long term debt	3,201	3,255	4,763	1,577	1,837
Total debt	3,344	4,415	4,743	2,942	2,877
Shareholders' equity	9,121	8,967	7,505	6,758	5,230
Total debt to total capitalization	37%	39%	39%	35%	35%
Net book value per share (7)	\$ 19.30	\$ 19.00	\$ 17.83	\$ 16.47	\$ 12.14
COMMON SHARE INFORMATION (8)					
Dividends per share	\$ 0.32	\$ 0.44	\$ 0.37	\$ 0.33	\$ 0.30
Market price					
High	\$ 44.45	\$ 43.07	\$ 30.00	\$ 27.33	\$ 20.57
Low	25.00	23.84	20.50	17.52	15.57
Weighted average shares (in millions)					
Basic	594.1	592.0	583.0	575.4	563.1
Diluted	627.4	620.2	583.0	582.0	577.8
Number of shareholders	3,543	3,812	31,212	33,096	33,450

- (1) All share and per share amounts reflect a three-for-one common stock split, payable October 2, 2007 to shareholders of record on August 6, 2007.
- (2) In December 2005, the Company acquired M&E International Corporation, significantly expanding the geology of energy business (see Items 7 and 8, credit and financial reporting in the acquisition).
- (3) Segment income is calculated as income from continuing operations before income taxes and without interest expense, excluding net financing charges, restructuring costs and business position gain (loss) (fiscal 2004 only).
- (4) Return on average share holders' equity (ROE) represents income from continuing operations divided by average equity. Income from continuing operations includes \$789 million, \$1,077 million, \$1,295 million, \$809 million and \$313 million of restructuring costs in fiscal years 2008, 2006, 2005 and 2004, respectively. Additionally, fiscal 2004 includes an \$38 million Japanese pension charge.
- (5) Working capital is defined as current assets less current liabilities, excluding cash, short-term debt, the current portion of long-term debt and the amount of deferred compensation costs.



Johnson Controls, Inc.
Consolidated Statements of Income

(in millions, except per share data)	Year ended September 30,		
	2008	2007	2006
Net sales			
Products and systems*	\$ 30,568	\$ 27,848	\$ 27,108
Services ²	7,494	6,776	5,127
	<u>38,062</u>	<u>34,624</u>	<u>32,235</u>
Cost of sales			
Products and systems	26,492	24,107	23,861
Services	6,044	5,441	3,945
	<u>32,536</u>	<u>29,548</u>	<u>27,806</u>
Gross profit	5,526	5,076	4,429
Selling, general and administrative expenses	(3,565)	(3,281)	(2,933)
Restructuring costs	(495)	-	(197)
Net financing charges	(258)	(277)	(273)
Equity income	116	89	112
	<u>1,324</u>	<u>1,607</u>	<u>1,138</u>
Income before income taxes and minority interests			
Provision for income taxes	321	300	63
Minority interests in net earnings of subsidiaries	24	12	42
	<u>979</u>	<u>1,295</u>	<u>1,033</u>
Income from continuing operations			
Income (loss) from discontinued operations, net of income taxes	-	(10)	2
Loss on sale of discontinued operations, net of income taxes	-	(33)	-
	<u>979</u>	<u>1,252</u>	<u>1,035</u>
Income before the cumulative effect of a change in accounting principle			
Cumulative effect of a change in accounting principle, net of income taxes	-	-	(7)
	<u>\$ 979</u>	<u>\$ 1,252</u>	<u>\$ 1,028</u>
Net income			
Earnings available for common shareholders	<u>\$ 979</u>	<u>\$ 1,252</u>	<u>\$ 1,028</u>
Earnings per share from continuing operations			
Basic	\$1.65	\$2.19	\$1.77
Diluted	\$1.63	\$2.16	\$1.75
Earnings per share before the cumulative effect of a change in accounting principle			
Basic	\$1.65	\$2.12	\$1.77
Diluted	\$1.63	\$2.09	\$1.75
Earnings per share			
Basic	\$1.65	\$2.12	\$1.76
Diluted	\$1.63	\$2.09	\$1.74

* Products and systems consist of automotive experience and power solutions products and systems and building efficiency installed systems. Services are building efficiency technical and global workplace solutions.



Johnson Controls, Inc.
Consolidated Statements of Financial Position

(in millions, except par value and share data)	September 30,	
	2008	2007
Assets		
Cash and cash equivalents	\$ 384	\$ 674
Accounts receivable, less allowance for doubtful accounts of \$87 and \$75, respectively	6,472	6,600
Inventories	2,099	1,968
Other current assets	1,721	1,630
Current assets	<u>10,676</u>	<u>10,872</u>
Property, plant and equipment - net	4,389	4,208
Goodwill	6,513	6,131
Other intangible assets - net	769	773
Investments in partially-owned affiliates	863	795
Other noncurrent assets	1,777	1,326
Total assets	<u>\$ 24,987</u>	<u>\$ 24,105</u>
Liabilities and Shareholders' Equity		
Short-term debt	\$ 156	\$ 261
Current portion of long-term debt	387	899
Accounts payable	5,225	5,365
Accrued compensation and benefits	1,024	978
Accrued income taxes	117	97
Other current liabilities	3,701	2,317
Current liabilities	<u>9,810</u>	<u>9,920</u>
Long-term debt	3,201	3,255
Postretirement health and other benefits	336	256
Other noncurrent liabilities	2,080	1,639
Long-term liabilities	<u>5,517</u>	<u>5,150</u>
Commitments and contingencies (Note 18)		
Minority interests in equity of subsidiaries	236	128
Common stock, \$0.1718 par value shares authorized: 1,800,000,000		
shares issued: 2008 - 594,169,139; 2007 - 595,384,212	8	8
Capital in excess of par value	1,547	1,452
Retained earnings	7,300	6,098
Treasury stock, at cost (2008 - 3,373,333 shares; 2007 - 1,617,978 shares)	(102)	(33)
Accumulated other comprehensive income	671	783
Shareholders' equity	<u>9,421</u>	<u>8,907</u>
Total liabilities and shareholders' equity	<u>\$ 24,987</u>	<u>\$ 24,105</u>



Johnson Controls, Inc.
Consolidated Statements of Cash Flows

(in millions)	September 30.		
	2008	2007	2006
Operating Activities			
Net income	\$ 979	\$ 1,252	\$ 1,028
Adjustments to reconcile net income to cash provided by operating activities:			
Depreciation	745	687	661
Amortization of intangibles	38	45	44
Equity in earnings of partially-owned affiliates, net of dividends received	(15)	(1)	(15)
Deferred income taxes	(40)	(63)	(404)
Minority interests in net earnings of subsidiaries	24	12	42
Non-cash restructuring costs	13	-	51
Loss on sale of discontinued operations	-	33	-
Equity-based compensation	48	48	61
Other	18	25	18
Changes in working capital, excluding acquisitions and divestitures of businesses:			
Receivables	281	(617)	344
Inventories	(49)	(150)	(77)
Other current assets	88	(262)	(32)
Restructuring reserves	388	(161)	59
Accounts payable and accrued liabilities	(694)	1,052	(379)
Accrued income taxes	44	13	116
Cash provided by operating activities	1,928	1,913	1,417
Investing Activities			
Capital expenditures	(807)	(828)	(711)
Sale of property, plant and equipment	52	83	90
Acquisition of businesses, net of cash acquired	(277)	(17)	(2,629)
Business divestitures	-	89	-
Settlement of cross-currency interest rate swaps	(160)	(145)	66
Changes in long-term investments	(78)	(233)	108
Cash used by investing activities	(1,270)	(1,051)	(3,076)
Financing Activities			
Increase (decrease) in short-term debt - net	173	(43)	(531)
Increase in long-term debt	240	115	2,739
Repayment of long-term debt	(935)	(505)	(359)
Payment of cash dividends	(297)	(195)	(218)
Proceeds from the exercise of stock options	34	104	97
Purchases of treasury stock	(69)	(26)	-
Other	(41)	8	13
Cash provided (used) by financing activities	(895)	(542)	1,741
Effect of exchange rate changes on cash and cash equivalents	(53)	61	40
Increase (decrease) in cash and cash equivalents	\$ (200)	\$ 381	\$ 122

The accompanying notes are an integral part of the financial statements.



- b. **Accounting Firm Information.** PricewaterhouseCoopers LLP, 100 E. Wisconsin Ave., Suite 1800, Milwaukee WI 53202. Telephone (414) 212-1600.
- c. **Financial Statements – Three Years.** We acknowledge this requirement.
- d. **Bonding Limits Information.** A letter from our surety company is included on the following page..

9. Attachments

List all attachments to your SOQ created to address additional information. List attachments by number and heading here in this ESCO Profile. If a computer-generated form is used, detailed descriptions can be included in the appropriate section rather than prepared as an attachment.

	<u>Item #</u>	<u>Heading Name</u>
Attachment A Form	A	Request and Authorization to Release Information, Release of Liability/Claims, and Agreement Not to Sue
Attachment for C.1.a.2	B	Resumes of Key Personnel
Attachment for C.2.i	C	Sample M&V Reports
Attachment for C.1.c	D	Sample Technical Energy Audit
Attachment for C.1.c	E	Sample Project Development Plan



Safeco Energy
New York Region Office
3500 NY Fidelity Rd. Ste. 1100
Hoffman Estates, IL 60139-3200

Phone: (847) 450-2400
Fax: (847) 450-2221
www.safeco.com

March 16, 2009

Oregon Department of Energy
625 Marion St. NE
Salem, OR 97301-3737

RE: Letter of Capacity; RFQ#: ODE-09-16

Gentlemen:

As surety, SAFECO INSURANCE COMPANY OF AMERICA has provided single bonds in excess of \$100,000,000 for JOHNSON CONTROLS, INC. and in the aggregate has a program over \$500,000,000.

It is our understanding that JOHNSON CONTROLS, INC. will be submitting a proposal for the above referenced RFQ. Should their proposal be accepted and a contract awarded to JOHNSON CONTROLS, INC., it is our present intention to become surety on the final bonds or bond that may be required guaranteeing performance of the contract on bond forms acceptable to JOHNSON CONTROLS, INC. and SAFECO INSURANCE COMPANY OF AMERICA.

JOHNSON CONTROLS, INC. is a valued customer of SAFECO INSURANCE COMPANY OF AMERICA and we recommend them highly. You understand, of course, that any arrangement to provide bid bonds and/or final bonds on a project is a matter between JOHNSON CONTROLS, INC., and SAFECO INSURANCE COMPANY OF AMERICA and we assume no liability to third parties if we do not execute said bond(s).

Sincerely,

SAFECO INSURANCE COMPANY OF AMERICA

Cathy Hulson
Attorney-in-Fact

Safeco Insurance Company of America - Class XV - A



C. ESCO Qualifications and Approach to Project

1. General Qualifications

Performance contracting is a natural solution to reducing energy and operating costs, improving comfort and updating building infrastructure for local and state governments, K-12 school districts, healthcare facilities, higher education institutions, and non-profit organizations. By partnering with customers in each market segment, Johnson Controls has become the industry leader in energy management. In nearly every state, Johnson Controls has conducted performance contracting services – and routinely works with State Energy Offices to help implement sound, environmentally-focused energy management programs.

Johnson Controls is the world's leading performance contractor, with 800 active projects involving more than \$4.6 billion in performance contracting guarantees for our customers. We have been recognized for our leadership in our industry by National Association of Energy Service Companies (NAESCO) with their highest rating of Energy Services Provider and are one of 11 firms in North America with this distinction.

We are also recognized as a member of the "Billion Dollar Roundtable" for purchases from Minority and Women owned businesses – one of only a dozen companies to achieve this distinction. Along the way, we created the world's largest repository of workspace information derived from our experience operating and maintaining over 1 billion square feet of facility workspace and controlling over \$5 billion in annual energy and operations spend. This allows us to benchmark the performance of their facilities and provides us the most current best-practices for achieving specific goals. Our experience over the years includes:

- Performing over 15,000 energy audits.
- Calculating more than 13,000 baselines.
- Designing, installing, and maintaining over 15,000 mechanical systems, over 15,000 electrical systems, and over 13,000 natural gas heating and cooling systems, as well as over 1,000,000 water meters installed.

Johnson Controls believes in sustainability as an organization and as a value proposition. In other words, we are a sustainable company and help our customers pursue sustainability as well. Our vision, "A more comfortable, safe and sustainable world," means that we consistently approach projects with an eye to the environment, the community and the financial bottom line of our customers.

Sustainability is about working in ways that integrate the environmental, economic and social needs of today and the future. With our solutions for reduced emissions, energy efficiency, green buildings, local employees, community involvement and lower operational costs, we address the health of the residents as well as the organization.



Johnson Controls, both nationally and out of our branch offices serving Oregon, has implemented many more energy-based projects than those listed in this response. By providing many other facility improvement services for renovation, construction, maintenance and operations projects, we deliver a full suite of facility services. This ability and experience in varied projects gives us a well-rounded knowledge base to deliver solutions that directly impact our customers' facility-related budgets. It also provides us with in-house experience across all lifecycle phases of a facility, including assessing, constructing, operating and renovating/renewing. Ultimately this is applied using a Total Cost of Ownership (TCO) model that will deliver the most impacting and sustainable results for our customers.

Johnson Controls divides its energy services business into specific market segments in an effort to allow its local teams a privilege of focus and expertise on the nuances of each client, their goals, processes and infrastructures. Within each market, we have national teams continuously exploring new ways of providing focused products and services to meet the specific requirements, needs and goals of that particular market sector. This approach creates constant innovation and real-time solutions to overcome the unique political, management and technical challenges facing each market in today's business climate.

a. Personnel Information.

1. Full-time Personnel. Johnson Controls holds all necessary licenses, registrations and certifications to conduct business in the state of Oregon. We employ 140,000 employees worldwide, 8,000 of whom are professional engineers. Nationally we also employ thousands of Union Tradesmen. [We have 266 employees in the state of Oregon and are also the largest service organization in Oregon.](#) Johnson Controls has the internal resources to perform all aspects of design, construction and facility operations for entities that use the ODOE procurement vehicle for performance contracting services.

By partnering with Johnson Controls, ODOE also receives commitment from regional and national support groups. While our local branch office in Portland has sufficient resources to perform all aspects of this project, we can also supplement these resources as needed to ensure project delivery in a timely and professional manner. At any time throughout the fulfillment of an energy performance contract, our local team can call upon our regional and national team of experts specializing in energy solutions for a variety of building types. Regionally, we have a strong presence; our company's acquisitions of Cal-Air and York International give Johnson Controls the widest bandwidth of energy services coverage throughout the West.

2. Qualifications and Experience of Project Personnel. The following table identifies the Johnson Controls employees who will have the primary responsibility for each task and phase of our projects, including technical analysis, engineering design, construction management, construction, training and post-contract monitoring. The resumes for these individuals are provided in Attachment B.



Task or Phase of the Project	Role and Responsibilities
Account Management Reggie Ingram David Bell Larry Hamburg Matt Emlen Eric Bauer Mark Martinez	Oversees all aspects of the process. Aligns resources with client goals. Single point of contact for the client. Coordinates all teams and timelines to ensure timely and complete delivery. Provides access to Johnson Controls expertise as appropriate.
Engineering Design David Meals	Manages all phases of the design engineering for mechanical, electrical and plumbing systems required for existing and/or new infrastructure elements identified to achieve the required utility consumption reduction. Leads the team charged with the analysis and audit for your facility. Professional engineering services functions are 100% sub-contracted and licensed professional engineers certify applicable engineered systems.
Technical Analysis Veera Vijay James Loewen	Develops solutions for specific performance contracting projects, ensuring technology selected is consistent with existing and/or new infrastructure elements, and driving to achieve most cost effective solution for client. Identifies potential improvements and calculates the costs and associated savings.
Project / Construction Management Marty Davis Scott Tyra	Leads Johnson Controls and subcontractor team performing the Construction Management and Construction tasks. The project manager is your primary contact during the implementation phase of the project. Directs the project installation, leads the project staff, including subcontractors, with responsible allocation and control of resources.
Post-Contract Monitoring Sandy Spencer Peter Ekstrom	Conducts project savings review, risk and scope review, and contract review. Ensures guarantee savings are achieved. Provides facility consulting services preparing operational and financial solutions, which maximize the efficient use of energy and operational services within facilities. The PAS is also responsible for overseeing and assuring the performance of the final performance contract.
Advanced Solutions Team Alan Kirn David Evers	The Advanced Solutions Team is staffed with highly experienced individuals who assist our local offices in implementing renewable energy technologies and large, complex mechanical installations such as central plant design.

In addition to staff licensed professional engineers Veera Vijay, Tom Semmes, Jim Loewen, the Portland branch of Johnson Controls has worked with many of Oregon’s design engineering firms such as Glumac, Interface, and PAE. It is important to note that the foundation of our account management is built upon customer satisfaction. Should any of our clients have preferences in the areas of subcontractors, consultants, brand names, licensed design professionals, or any area of a project whatsoever – our account teams work diligently within those parameters to ensure that our clients are satisfied.

3. Areas of Expertise. Our professionals are highly proficient in areas such as applying energy and water conservation technologies, determining savings, project design, measurement and verification strategies,



project financing alternatives, project management, commissioning, facilities operations, predictive and preventive maintenance, training, and guarantee performance monitoring.

Johnson Controls provides the following services for our performance contracting projects. See item 5. below for duties normally performed by Johnson Controls and by our subcontractors.

<p style="text-align: center;">Heating Systems</p> <ul style="list-style-type: none"> Boiler Replacement High Efficient Modular Boilers Burner Replacement Boiler Stock Heat Reclaim Perimeter Radiation High Efficient Domestic Water Heaters Gas Line Turbulators Steam Trap Retrofits Steam Pressure Control Temperature Reset Control Electric Heating to Gas Piping Insulation 	<p style="text-align: center;">Cooling Systems</p> <ul style="list-style-type: none"> Chiller Replacements Gas Fire Centrifugal Chillers CFC Containment Conversions Tower Free Cooling Commercial Refrigeration Cooling Towers Thermal Energy Storage Systems Reclaim A.C. Heat Rejection 	<p style="text-align: center;">HVAC Systems</p> <ul style="list-style-type: none"> Inefficient Air Handling Unit replacement Variable Frequency Drives Heat Recovery Systems Low Leakage Air Dampers Variable Air Volume Systems Demand Control Ventilation Exhaust Fans Fan Coil Units Motor Replacement Unit Heaters/Ventilators Computer Room Units
<p style="text-align: center;">Water Management Systems</p> <ul style="list-style-type: none"> Retrofit Flush Valves, Showerheads, Faucets, Toilets Automated Water Systems Cooling Tower Retrofits Ice Machines Walk-in Coolers/Freezers Domestic Water Waste Heat Recovery 	<p style="text-align: center;">Lighting Systems</p> <ul style="list-style-type: none"> Lighting Controls Daylight Harvesting Occupancy Sensors Incandescence to Fluorescent LED Exit Signs Metal Halide Fixtures Emergency Lighting Ambient Light Control Exterior Lighting Retrofit 	<p style="text-align: center;">Control/Automation Systems</p> <ul style="list-style-type: none"> Facility Management Systems Direct Digital Controls Pneumatic Controls Manual Valves to Automatic Valves Air Compressors Lab Flume Hood Control Multi-System Integration
<p style="text-align: center;">Energy Services</p> <ul style="list-style-type: none"> Maintenance and Operation Energy Audit/Design Construction Management Project Management System Installation Measurement and Verification Commissioning Services Energy Guarantees Energy Metering Utilities Procurement Power Factor Correction Utility Rate Structure Assessment Indoor Air Quality Owner Training Facility Operation Assessments Financial Services 	<p style="text-align: center;">Renewable Energy</p> <ul style="list-style-type: none"> Cogeneration Biomass Solar Power - Photovoltaic & Thermal Wind Turbine Geothermal Heat Pumps Fuel Cells <div style="text-align: center;">  </div>	<p style="text-align: center;">Miscellaneous</p> <ul style="list-style-type: none"> Central Heating/Cooling Plants Electrical Power Systems Emergency Generators Turbine Generators Switch Gear Building Envelope Air Curtains Elevator Modernization Kitchen Equipment Energy Efficient Windows Roofing Sewer and Waste Water Weatherproofing Fire Preservation System Building Infiltration Measures Power Factor Correction



4. Contract Negotiations Personnel. David Bell, Johnson Controls, 4011 SE International Way, Suite 605, Milwaukie, OR 97222. Telephone: (503) 305-2027.

5. Subcontractors. Johnson Controls is entirely flexible in hiring subcontractors recommended by our customers. As a leader in the energy efficiency industry in Oregon, we have an extended network of subcontractors that compete for our projects. We find that these firms give us best industry pricing because of the local volume of work we perform. In addition, we always consider subcontractors that our customers prefer working with. Our installation team has a process for ensuring competition among well-qualified subcontractors, re-verifying scope and further tightening subcontractor costs. This process delivers exceptional value to our customers. Furthermore, we are vendor-neutral. If it is in the best interests of our customers to install a competitor's control system or chiller, we will do so without hesitation.

The following table is indicative of those services provided by our staff, and those typically subcontracted by Johnson Controls to perform portions of the project.

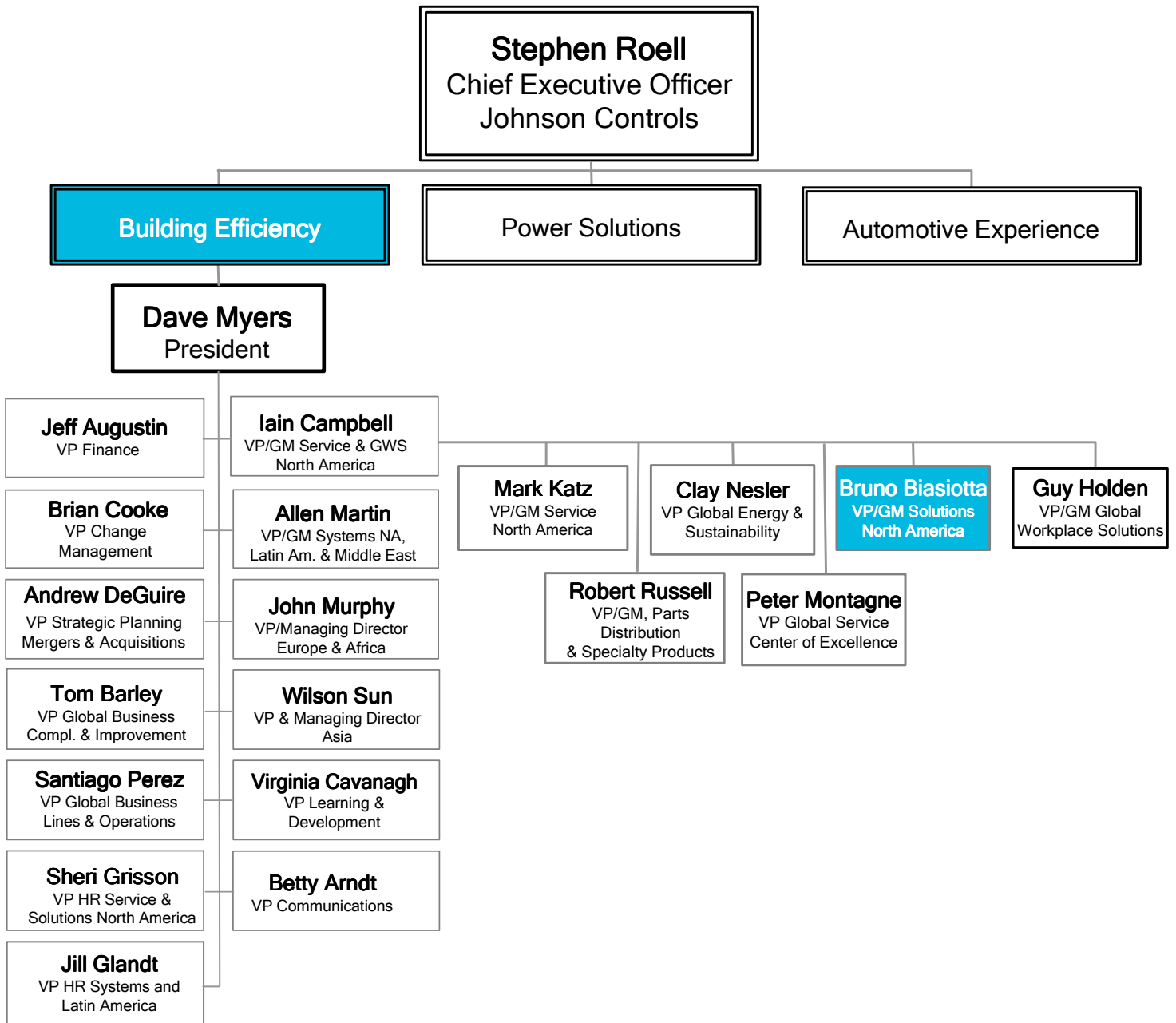
Type of Service	Performed by Johnson Controls	Performed by Local Subcontractors
Auditing	X	
Design	X	X
Engineering	X	X
Construction Management Services	X	
Procurement / Supply of Equipment from Vendors and Manufacturers	X	
Electrical Installation	X	X
Plumbing Installation	X	X
Lighting Installation		X
HVAC Systems Installation	X	X
Controls Systems Installation	X	X
Renewable Energy Project Installation	X	X
LEED / Energy Star Certification	X	
Measurement & Verification	X	

6. Sub-consultants. At this point in time, Johnson Controls has not selected any sub-consultants to use on this project. If sub-consultants are eventually proposed as part of our solution, we will coordinate with ODOE regarding issues of a sub-consultant's role, qualifications, and their suitability for work within the facility environment.

7. Organizational Chart. Our company-wide organizational chart is included on the following page.



This project falls under the Building Efficiency business unit and the Solutions North America group, both depicted in blue.





8. Key personnel references. This information is included in the resumes for each key project team number. Please see Attachment B.

b. Project History.

The Project History references are provided on the following pages. [These are the three owners that you may contact as references:](#) (1) Steve Kreidler, University of Central Oklahoma, 405-974-2485, (2) Bernie Babcock, Facilities Manager, Treasure Valley Community College, 541-881-8822 ext. 354, and (3) Sam Overton, VP-Administrative Services, Rock Valley College, 815-921-4445. [You may also contact the following Sub-consultants/subcontractors as references, whose work touches several of the Project History information:](#) (1) Doug Mahnken, Director of Technical Operations, Innovative Power Solutions, 913-663-1150, (2) Steve Straus, President, or James Thomas, VP, Glumac Engineers, 503-227-5280, and (3) Jim Bertsch, Owner, Ashley- Bertsch Group, 509-783-9381.

Following is a sample list of performance contracting projects Johnson Controls has completed for customers throughout the country within the last three years. This list is evidence of our ability to manage performance projects of all scopes and sizes.

Project	Year	Contract value (million \$)	Contact name & phone number	Highlights
Local Government				
Clark County, WA	2008	\$7.8	Darrel Stump 360-397-2238	Campus-wide EMS system for 11 buildings, water conservation, chiller with tower, boiler with air handlers, heat pumps, mechanical VFD, motor and control revisions, lighting, Solar PV & Thermal
City of Portland, OR	2008	\$0.35	John Acker 503-823-6875	Efficiency upgrades for East Portland Police Precinct, heavy equipment replacement, lighting
Clackamas County, OR	2008	\$10	Lane Miller 503-742-5442	Performance contract with 20-year guarantee of utility savings reduced lifecycle costs for a new LEED™ Silver Development Services Building.
City of Northfield, MN	2008-2009	\$3.2	Joel Walinski 507-645-3009	Lighting, ice arena efficiency, BMS, water conservation, updated boiler plant, street lighting
City of Lafayette, CO	2008	\$1.2	Curt Cheesman 303-665-0469	Solar thermal & photovoltaics, wastewater biogas utilization, LED traffic signals, bldg efficiency
Ravalli County, MT	2008	\$2.1	Carlotta Grandstaff 406-375-6500	Energy efficiency upgrades to five buildings, and improvements to lighting, heating, air conditioning and facility management systems
City of Laurel, MT	2007	\$1.7	Mary Embleton 406-994-7413 x13	Improvements in 12 buildings reduced city energy costs by 25%. Also achieved efficiencies in water utility.
Flathead County, MT	2007	\$3.9	Mike Pence	Improvements in 13 buildings reduced city energy




			406-758-5503	costs by more than 25%.
City of Rochester, MN	2007	\$5.6	Dale Martinson 507-328-2861	Improvements in 20 buildings including an airport and an ice arena, LED traffic signals
City of Aurora, CO Phases 1, 2, 3	2006 – 2007	\$3.2	Russell Grant 303-326-8160	Energy efficient boiler systems & centrifugal chillers, redesign and re-piping of mechanical rooms, DDC system upgrade
Higher Education				
Carroll College. (Helena, MT)	2008	\$2.8	Tom McCarvel 406-447-4409	Efficiency upgrades for 15 buildings, campus-wide steam trap retrofit, propane mixing system
University of Central Oklahoma, OK (Edmond, OK)	2002- 2007	\$10.2	Steve Kreidler 405-974-2251	Replacement of central plant chillers, repair of thermal storage system, replacement of central plant boilers, expansion of central heating and cooling service, lighting retrofit AHU replacements
University of Oklahoma	2008	\$20.2	Don Carter 404-325-5457	Improvements at general education buildings, including controls and lighting
Tallahassee Community College (Tallahassee, FL)	2008	\$4.5	Robert Bell 850- 201- 8480	Energy upgrades for 20 buildings, nearly 900,000 square feet
K-12 Education				
Mattoon School District Mattoon, IL	2007	\$9.5	Larry Lilly 217-238-8850	New Central Heating & Cooling, VAV System, Lighting, Fire Alarm, Building Automation
Little Rock School District, AR	2007	\$2.2	Mark Burkhalter, 501.447.5250	HVAC system replacement & retrofit for five schools
Rio Linda School District, CA	2008	\$5	Tim Bonds 916-286-4997	Fourth phase of performance contracting for this 21-school district. A fifth phase is planned.
Mt. Diablo Unified School District, Concord, CA	2007 - 2009	\$9.4	Dr. Dick Nicoll 925-682-8000	HVAC replacement and building automation system. Two million square feet of facilities.
State & Federal Government				
US Department of Energy Richland Operations, Hanford Nuclear Reservation	2008	\$10.7	DJ Ortiz 509-376-0950	Water storage tank insulation and heating system modifications, chiller equipment upgrade, energy management system upgrade, diesel-to-electric boiler conversion totaling \$1,958M in annual energy savings.
US Dept of the Interior Bureau of Land Management delivery Order 2	2007	\$4.1	Ken Morin 303-236-6418	Boiler plant upgrades, energy management system upgrade, lighting retrofit and ground source heat pump installation for 83 facilities spread out over six western states. Winner of the 2007 Presidential Award for Leadership in Energy Management. JCI was the only ESCO to be given this award.
Commonwealth of Pennsylvania, Laurel Highlands Prison	2008	\$33.1	Bob Calik 717-975-4884	6.5 megawatt co-generation plant utilizing methane from a nearby landfill.



Virginia Department of Corrections	2006-2007	\$18	Walid Daniel 804-674-3102 x1215	Lighting retrofit, Water conservation, temperature control upgrade, HW/DHW Separator, Heat pump condensing unit, Misc. Mechanical
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The following references are in the required format.

Treasure Valley Community College						
		Project Identification: Project Owner: Treasure Valley Oregon Community College Type of Project: Performance Contract Location: Ontario, Oregon Project Dates: Start: 2004, End: 2014 Project Size: Campus wide Project Dollar Amount: \$1,490,000 Source of Funds: Capital Lease Contract Terms: 15 yrs Project Schedule: Completed on schedule (yes)				
		Project Comments: Major retrofit for the college that didn't have the funds to address deferred maintenance with State funding. The utilization of an EMCS has significantly improved the environmental comfort and air quality of staff and students while reducing Maintenance Staffing Hours and equipment issues. The Maintenance Staff is very proactive and continually utilizes the EMCS to further refine set points and occupancy schedules.				
		Technical Design Personnel: Project Director: Joe Autry Construction Manager: Matt Brown Energy Engineer: Wendy Grosvenor Measurement & Verification: Matt Bruce				
		References: Owner: Bernie Babcock, Facilities Manager Treasure Valley Community College (541) 881-8822 ext. 354				
		List of Improvements: <ul style="list-style-type: none"> ▪ Lighting Upgrade ▪ AHU's Replacement ▪ Boiler Retrofit ▪ DDC Retrofit ▪ Electric Sub Metering ▪ Building Envelope Improvements ▪ Vending Miser ▪ Product Waste Improvements 				
Measures and Savings						
Projected Average Annual Savings	Guaranteed Annual Savings	Actual Annual Savings				
		Year #1	Year #2	Year #3	Year #4	Year #5



kWh: 910,887	kWh: 797,208	788,170	873,625	781,573	732,798	
\$ 74,613	\$ 64,857	\$45,759	\$48,680	\$54,316	\$57,626	
Therms: 14,537	Therms: 12,647	11,826	11,296	16,571	10,913	
kW: 2,765	kW: 2,406	910	1,409	1,601	1,243	
Gal:	Gal:					

Performance Guarantee

10 years

Central Oregon Community College



Project Identification:

Project Owner	Central Oregon Community College
Type of Project	Performance Contract
Location	Bend, Oregon
Project Dates	Start: 2005 End: 2016
Project Size	Campus wide
Project Dollar Amount	\$841,659
Source of Funds	BETC, ETO Oregon Dept of Energy / internal capital
Contract Terms	1 yrs
Project Schedule	Completed on schedule (yes)

Project Comments

The College went through a competitive RFP process to select Johnson Controls. Central Oregon had deferred maintenance needs and higher than expected Energy consumption was resulting. The administration used the attractive BETC tax Credits and Energy Trust of Oregon funding to buy down the project Cost. JCI evaluated all buildings on campus which resulted in opportunity in 16 buildings. Projects included Lighting efficiency involving retrofits and new lighting fixtures for improved illumination and efficiency. The college was dealing with an aged campus wide DDC which they had limited funds for replacement. The system was eroding in control and as such was impacting comfort and energy cost. JCI developed two cost option, both allowing the campus to bridge the upgraded replacement system with any new control system which might be implemented through construction at a later date. The campus utilized satellite boilers which were aging and in many cases obsolete. JCI developed an option to replace same with higher efficiencies. This improvement was chosen by COCC to be implemented later on their own. COCC requested that JCI evaluate the merits of economizing the costs of trash removal. COCC had already implemented a campus recycling system. JCI's solution implemented under the PC contract was to augment this practice by centralizing waste collection including a compactor for reduced waste management costs.

Technical Design Personnel:

Project Director	Dennis Lawler
Senior PM	Leonard Fretland
Construction Manager	Leonard Fretland
Energy Engineer	David Meals & Veera Vijay
Measurement & Verification	Peter Ekstrom

References:

Owner:
Gene Zincaft
Central Oregon Community College
541-383-7776

List of Improvements:

- Energy Eff. Lighting- T-8 / EB, LED Exits, Occ Sensors,
- Campus Wide Upgrade of BAS
- Retro Commissioning BAS
- Utility Metering & Monitoring
- Variable Air Volume
- Waste Management Optimization



Measures and Savings

Projected Average Annual Savings	Guaranteed Annual Savings	Actual Annual Savings				
		Year #1	Year #2	Year #3	Year #4	Year #5
kWh: 764,157	kWh: 725,949	805,803	798,543			
\$ 41,972.	\$ 39,873.					
Therms: 57,246	Therms: 54,383	60,635	59,821			
\$ 46,979.	\$44,630.					
Total: \$108,206*	Total: \$103,758*	\$115171	\$114,133			

* Includes Waste Management Savings of \$19,255.

Performance Guarantee

Johnson Controls provides ongoing measurement and verification including semi-annual reporting and annual reconciliation. At the request of the college, Johnson Controls is supplementing staff capabilities to provide preventive maintenance on the satellite boiler's and the direct digital control systems.

University of Central Oklahoma



Project Identification:

Project Owner:	University Central Okalahoma
Type of Project:	Performance Contract
Location:	Edmond, OK
Project Dates	Multi phased
Project Size	45 buildings totaling 1,600,000 SF
Project Dollar Amount	\$13,000,000
Source of Funds	Municipal Lease
Contract Terms	Guaranteed energy and operational savings
Project Schedule	Completed on schedule

Project Comments

The University of Central Oklahoma's (UCO) goal is to become the university of choice in the state, which requires not only strong academic programs but an atmosphere that is friendly and caring in which students thrive. Johnson Controls is helping the University reach that goal by creating a comfortable, appealing campus while overcoming financial constraints. As a result, UCO is delivering a quality learning environment and, at the same time, saving more than \$850,000 annually.

UCO entered a 20-year performance contract with Johnson Controls. The contract included campus-wide lighting retrofits, water conservation measures, central plant upgrades, a heating plant upgrade and building renovation, thermal storage upgrades, boiler and chiller replacements, and optimization of the Metasys system. Dehumidification and air handling problems were addressed and the central plant loop expanded to incorporate additional buildings. The contract guarantees savings of \$650,000 annually.

Technical Design Personnel:

Project Director	Mark Martinez
Senior PM	James Jozefiny
Measurement & Verification	Abhijeet Barve

References:

Owner:
Steve Kreidler, Vice President of Admin and Finance
(405) 974-2251

List of Improvements:

- Replacement of Central Plant chillers
- Repair of Thermal Storage System
- Replacement of Central Plant Boilers
- Expansion of Central heating and cooling service on campus
- Lighting retrofit
- Water conservation improvements



	<ul style="list-style-type: none"> ▪ Hot water heater replacements ▪ AHU replacements ▪ Utility rate structure conversions ▪ Utility meter consolidations ▪ Indoor air quality improvements ▪ Ductwork modifications ▪ Facility management system
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Measures and Savings

Projected Average Annual Savings	Guaranteed Annual Savings	Actual Annual Savings				
		Installation (Mar'02-Mar'04)	Year 1 (Apr'04-Mar'05)	Year 2 (Apr'05-Mar'06)	Year 3 (Apr'06-Mar'07)	Year 4 (Apr'07-Mar'08)
kWh:	Multi phased	10,227,697	8,995,344	9,017,610	9,802,049	11,490,595
\$	\$	\$1,187,960	\$949,218	\$1,052,513	\$974,053	\$1,130,146
Therms:	Therms:	356,380	213,810	582,819	244,488	292,762
kW:	kW:	4,929	10,875	5,488	6,329	8,988.49
Gal:	Gal:	27,226	21,309	11,178	8,352	17,883

Performance Guarantee

\$18,723,000

2. Performance Contracting Approach

a. Project Summary

Scope of Services Offered. Our success in securing major performance contracts – and in many cases exceeding the projected results – has to do with our solid engineering foundation and our systematic approach to each task. We are outcome-focused, process-driven and determined to exceed our customer’s expectations. Since we entered the performance contracting business in 1983, we have been perfecting design, implementation and measurement processes. Following a proven and dynamic process ensures a successful outcome for all our clients. Our customers also will be able to take advantage of new technologies that Johnson Controls develops in the future.

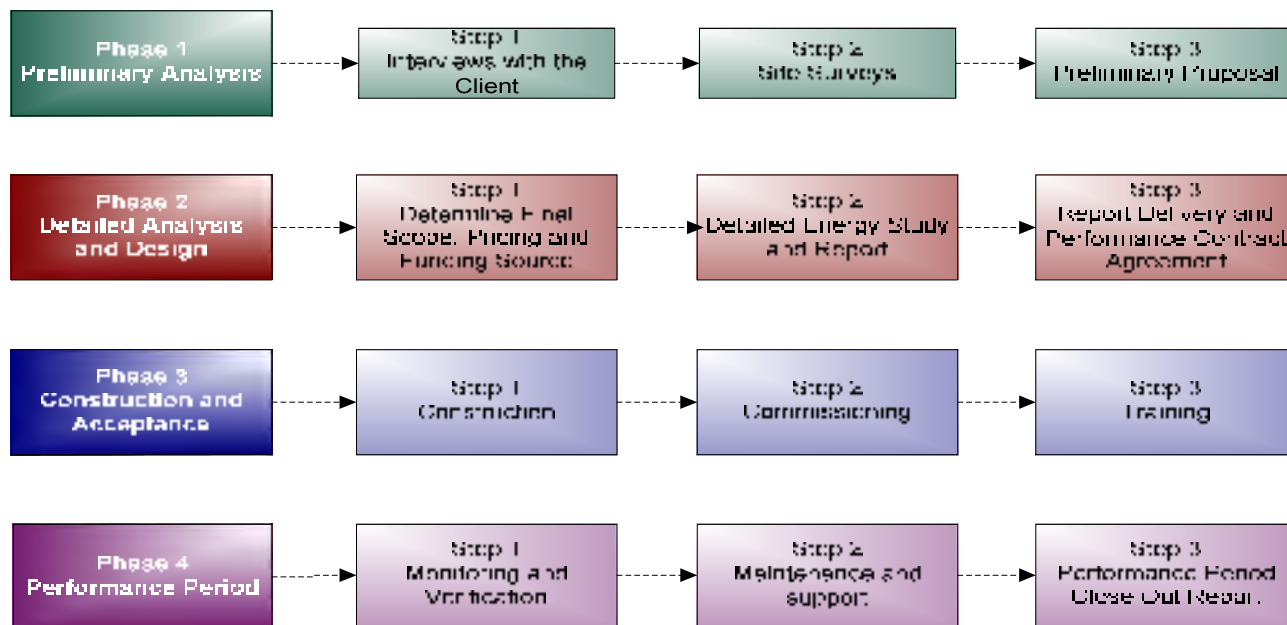
The Johnson Controls Performance Contracting Process

Teamwork	We believe the best way to develop a long-standing partnership is to truly work together. As a team member, our clients receive timely information so that they can make decisions for long term impact.
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Analyzing Your Needs	Together, we'll discuss the goals, challenges and risks of the organization. A performance-contracting program that does not address the key business and financial criteria of the organization will not succeed in the long run.
Preliminary Survey	After we determine your needs, we perform a preliminary survey of your energy consuming system. We take the time to gather existing information, analyze utility performance, and identify potential operational and energy improvements. Then we discuss and interpret our findings in complete detail. We mutually decide whether to proceed based upon the preliminary findings.
Comprehensive Audit/Design of Measures	Next, we perform a comprehensive audit of your systems to substantiate in detail the expected energy and operational savings. From this information we can design measures that will deliver those savings and determine the associated costs for the measures. Measurements are taken to ensure that the baseline conditions are properly understood. Upon completion of the comprehensive audit, we present the findings and the design of our proposed measures so that you are part of the development team for the final project scope.
Financial What If Analysis	We prepare a financial matrix of project possibilities and optimize the package of projects based upon your financial criteria and budget availability. A financial model will allow the client to select and de-select projects to assess their individual contribution to the overall project.
Implementation of Selected Measures	Once you have selected the measures that make the most sense to your needs, we will prepare cost and schedule documentation and a project execution plan. With these tools we will work with you to implement the measures, including retrofit work, new construction, optimization, etc. We will coordinate with your staff to insure that there is minimal disruption to your business during the implementation.
Training Your Staff	Once improvements are implemented, we train your personnel to maximize the benefits of those improvements. Knowledgeable staff helps ensure the sustainability of a savings project.
Measuring Results	The "performance" in performance contracting means our improvements will impact your bottom line to the extent that we agreed upon contractually. We have developed thorough performance measurements, but you don't have to be an engineer to understand the results. We have made our baseline and savings calculations much easier for customers to see exactly where savings were achieved, and to what extent.

Management Approach. Through the course of completing more than 2,500 performance contracts over the past 26 years, Johnson Controls has developed a **four-phase approach** to maximizing energy savings for our clients, as depicted below.



General Coordination and Mobilization. Typically the project team is selected by the Project Manager based on the complexity, schedule, and size of the project. By leveraging our local relationships in the construction community and incorporating any customer-preferred organizations, Johnson Controls will deliver projects on time and within budget. Equipment and materials are ordered using our national agreements so that we may be able to pass on the best pricing and delivery terms.

In the earliest phases, our team works to develop a scope that meets the design, financial and timeline criteria. Regarding scheduling, it is often critical to identify any long-lead items and specific construction requirements related to pieces of equipment. We also identify significant milestone dates for each phase. The Johnson Controls Project Manager will coordinate all activities during the implementation phase, including those referenced in Section C.2.a of this RFQ: mobilization, construction staging, site access, vehicular circulation, pedestrian circulation and noise.

Subcontractor work packages are then finalized and formal construction implemented. We provide overall site management and client interface during the project as well as and all financial, and non-financial, information as may be required by each customer.

Weekly project meetings are held with the subcontractors, designers and the client to review progress and address items. All updates will be reviewed with our customers to ensure that project requirements are met. During implementation, the performance, cost and schedule will be tracked to minimize any variance by subcontractors. Prompt payment of approved progress payments will ensure that subcontractors are able to continue to deliver quality installation - on schedule. All changes required for the subcontracted activities will be documented for the protection of our customers.



Preliminary Project Schedule

Johnson Controls uses Microsoft Project to generate detailed project schedules. The following table summarizes all key dates of a typical project schedule.

1a)	Commencement of Energy Audit	03/23/2009
1b)	Completion of Energy Audit	04/13/2009
2a)	Baseline Calculation Workshop	04/20/2009
2b)	Final List of Proposed Improvements Workshop	05/25/2009
2c)	Final Contract Proposal	06/08/2009
3)	All Required Permits and Government Approvals	07/24/2009
4)	Procurement of Major Equipment	08/12/2009
5a)	Commencement of Construction	08/12/2009
5b)	Substantial Completion of Construction	04/05/2010
6)	Training of Facility Personnel	04/15/2010
7)	Commencement of Normal Operations and Completion of Final Punchlist Items	04/29/2010

b. Engineering Design.

Upon the approval of the comprehensive Technical Energy Audit and Project Development Plan, we begin the required design tasks to implement the energy efficiency measures and solidify the approach to completing these project tasks. We will publish the designs and any subsequent updates to the design requirements for use in preparing the scope of work for internal resources and for any subcontractors. Final designs are completed using the team resources that produce the most cost-effective solution.

Our engineering team will oversee the design drawings and documentation phase. We may use partner organizations for the production of design and construction documents. Our staff engineers will focus on concept, product and system analysis, and plan and specification review. We partner with the most respected architectural and engineering firms in Oregon for assistance in creation of design and construction documents, building codes, and Fire Marshall review.

Final designs and detailed project schedules will be presented to the customer for review and approval. Any issues affecting the implementation schedule, such as equipment lead times or seasonal equipment requirements, will be resolved at this time. Finalization of the detailed schedule – including allocation of resources – will then be completed. Final project costs and any potential variance will be analyzed, and mitigation measures initiated as needed. We will then complete the detailed schedule, including allocation of resources. Once detailed procedures for final project acceptance are established, these will be verified against the established project goals and the customer's requirements – as well as each energy efficiency measure's performance specifications.

c. Technical Energy Audit/Project Development Plan.

Upon selection as your performance contracting partner, Johnson Controls will immediately begin preparing for a Technical Energy Audit of the customer's facilities, as summarized below. The requested sample Technical Energy Audit and Project Development Plan are included as Attachments D and E.



Step 1: Understanding Your Requirements – Prior to beginning the audit, Johnson Controls will meet with the customer's management to discuss both general and specific concerns and goals for the project. To ensure that they are informed of the progress, and that we are aware of their concerns, we communicate regularly with the customer's team throughout the audit process.

Step 2: A Survey of the Facilities – For projects that involve more than one facility, our project development engineers will survey the customer's sites to gather information on – and take measurements of – the energy consuming equipment currently in use. In addition, they will review existing utility consumption data in conjunction with the survey results. The goal is to identify opportunities for modification or replacement that have the greatest payback on investment, and the potential for long-term savings and improved performance.

Step 2a: Utility Survey – A very important step in the development of a successful and productive building survey is understanding how buildings are designed to perform relative to their actual use. The utility survey provides our engineers with that insight. By performing the utility survey prior to the building survey, we can deduce much about the systems that are consuming the most energy, how the utilities are charging for each unit, and what strategies might be developed to maximize energy savings and reduce wasteful consumption. In addition, we will evaluate utility and fuel supply opportunities for each project.

Step 2b: Building Survey – Once the utility survey has been completed, a comprehensive building survey may be performed to gain a thorough understanding of the facilities and their systems. The building survey is a critical task to our overall engineering process. The survey includes: (1) Review of the as-built construction drawings, (2) Identification of equipment operation and building occupancy schedules, (3) Measurement of air flow rates, temperatures, lighting levels, and power demand of equipment and power distribution panels, (4) Survey of installed lighting, (5) Examination of the condition and actual design of HVAC control systems, and (6) Determination of the actual power distribution configuration.

Step 3: Energy Audit Analysis – At this point, we create a list of high-potential energy savings projects to pursue in more depth during the Project Development phase. The audit results in documentation pertaining to equipment identification, current usage, potential savings calculations, design information, projects proposed, and the timeframes needed for effective implementation. Our team then analyzes the costs and risks involved in implementing each project so that customers will understand how each project will contribute to their overall goals of the performance contract – both financially and operationally.

d. Baseline Calculation Methodology

Following is a summary of how Johnson Controls develops a baseline when utility usage is to be measured:

1. Select a Tuning Period: The first step in developing a baseline is to identify a pre-retrofit period of time representative of physical and operational conditions within the premises. In the Metrix software program, this period of time is known as the tuning period.

2. Identify Relationships of Consumption to Independent Variables: A regression analysis calculation is then applied to each individual utility item during the selected tuning period against one or more independent variables. The resultant relationship(s) of utility consumption as a function of time, weather and other independent variable(s) is represented by the regression analysis calculation.



3. Utility Consumption Savings: For each time period being evaluated, an adjusted baseline is calculated by performing the regression analysis and applying to it any necessary modifications. This adjusted baseline represents the utility consumption that would have occurred had the projects not been implemented. Utility consumption savings is the difference between the adjusted baseline consumption and the actual post-retrofit consumption for the same period.

4. Utility Cost Savings: Utility cost savings is the result of applying the appropriate utility unit costs to the utility units. The method of selecting unit costs is documented and will be used throughout the term of the agreement to assign costs to the physical units. Total dollar savings is the sum of the utility cost savings from each utility type, plus any other savings as identified.

The regression analysis methodology is capable of adjustments for changes in base load, heating degree days, cooling degree days, and up to three other variables. The inclusion of any variables will be mutually agreed upon by Johnson Controls and the customer, and supported by regression analysis documentation.

e. Adjustment to Baseline Methodology

The baseline may be adjusted to account for the weather, anticipated increase occupancy levels, legal head count, non-functional equipment, billing irregularities including broken meters, and code compliance.

Weather: Using long-term weather data, such as a 30-year Typical Meteorological Year (TMY) data set, is a cost-effective way to ensure that adjustments due to weather are not necessary during the contract. Johnson Controls routinely uses this approach to provide a cost-effective M&V plan, rather than employing costly weather correction baseline adjustments each year.

Occupancy: In the event that there is significantly less than full occupancy at any building during the baseline period, the baseline usage will be adjusted to reflect the additional usage that would occur had there been normal occupancy. Since occupancy is a factor beyond our control, an agreed upon level of occupancy (Maximum Legal Head Count) is typically stipulated for the term of the contract.

Nonfunctional Equipment: If there are large pieces of nonfunctional equipment and/or new equipment to be installed at the sites to be included in the performance contract, such as ventilation systems that customers determine should be operational throughout the term of the contract, the baseline will be adjusted to reflect the additional usage that would be expected had the equipment been running.

Code Compliance: Johnson Controls will take into consideration environmental, life safety, security and other code compliance issues that may have an impact on baseline consumption for the term of the contract. All energy efficiency measures will be designed to comply with Oregon building codes.

f. Dollar Savings Calculations.

Utility cost savings is the result of applying the appropriate utility unit costs to the utility units. The method of selecting unit costs is documented and will be used throughout the term of the agreement to assign costs to the physical units. Total dollar savings is the sum of the utility cost savings from each utility type, plus any other savings as identified. The dollar savings are calculated as shown below.

Dollar Savings = Units Saved X Utility Rate from Contract or Actual Utility Rate



g. Guaranteed Savings Calculations.

Johnson Controls uses a variety of industry standard calculations and proprietary software tools in the delivery of its energy and utility management services. The utilization of verification methodologies that are technically accurate and mutually acceptable to both contracting parties is of paramount importance to Johnson Controls. The savings methodologies utilized can consequently range from simple monthly bill comparisons through continuous metering utilizing one-minute demand interval data. Software tools used by Johnson Controls for calculating all potential savings include:

- Market Manager - an extensive Windows-based building simulation software tool that has been used widely by utility companies to perform load studies, understand impact of different rate structures, and prepare incentive packages
- eQuest – a U.S. Department of Energy software program that models the facility in order to calculate savings
- DOE.2 Modeling Program
- Metrix - a utility accounting program used to establish a utility bill baseline and subsequent comparative analysis
- JC-WebBench – a web-based tool that is our warehouse of building information from client sites that can be used to benchmark other facilities.
- Microsoft Excel spreadsheet software (i.e. to compile O&M data)

Based upon the results of the facility survey and benchmarking, energy savings calculations are performed to analyze the opportunities to improve facility efficiencies by conserving energy through modifications of both operating and control schemes. The impact of equipment replacement and/or modifications are also investigated and quantified. These calculations are performed with a variety of engineering software.

Most common control equipment, and system modification calculations are performed using Johnson Controls energy efficiency software, JC Calcs©. JC Calcs is designed to enable “time compression” in the energy engineering function of evaluating energy efficiency measures. It greatly reduces the time required to develop preliminary saving calculations used to evaluate the merit of potential improvements.

For calculations involving more complicated control, equipment and system modifications, we use building modeling software, such as Market Manager™. We can also use the Department of Energy’s eQuest, to model the entire system or facility and to ensure the accuracy of the results.

The final savings calculation total for each facility will be supported by the results of both JC Bench benchmarking results, and engineering calculations performed using JC Calcs and other applicable software. These calculations will be reviewed in their entirety with our client team. **Only calculations and savings projections that customers have approved will be included as part of the project.**

Sample calculations for lighting, boilers, chillers, motors and drives, controls, ventilation measures are provided throughout the sample Technical Energy Audit included in this response. Placing that information in this proposal would far exceed the 25-page restriction of Section C. Johnson Controls will be happy to



provide further information should the State want to analyze further examples, or wish this information expressed differently.

h. Training Provisions.

For over 60 years, the Johnson Controls Institute has been widely acknowledged as one of the best training and educational sources in the industry. Each year, more than 4,000 customers and employees attend courses at the Johnson Controls Institute. These Institutes have made Johnson Controls' customer and employee training more convenient and affordable. All Institute locations have training labs for building management systems, computer instruction, mechanical equipment, and preventive maintenance. Professional full-time instructors, who are among the most knowledgeable in the industry, conduct all of our classes. They are dedicated professionals whose daily experiences with HVAC systems, troubleshooting and maintenance, building management system control strategy, and energy management theory result in a level of expertise unsurpassed in the industry.

The development of a comprehensive, directed and sustainable training program is one of the most critical aspects of a business partnership. It will ultimately determine the overall success of a project and a relationship. To begin with, Johnson Controls will interview and evaluate the skills and knowledge of the customer's primary operations staff regarding energy management. During these interviews, we will:

- Define current maintenance and operating procedures, and those required for new equipment
- Determine and organize training programs, based on need and skill level, for functional groups within the organization (e.g., supervisors, maintenance staff)
- Perform training with each group using a mix of theory, hands-on practice, and maintenance manual application
- Periodically revisit the training program's effectiveness and modify as necessary

Johnson Controls will develop training manuals with the customer so that they are tailored as needed and available to the personnel who will be responsible for operating and maintaining the equipment. At a minimum, training manuals will contain as-built prints, OEM operations guides, OEM maintenance manuals, and OEM summaries of recommended service. Training on fundamentals and new technology is also available to from the Johnson Controls Institute via classroom or remote training.

i. Measurement and Verification Method and Sample.

Our standard approach to track performance follows the International Performance Measurement and Verification Protocol (IPMVP) along with Federal Energy Management Program (FEMP) guidelines to measure and verify savings. Utilizing these standards, we offer four general approaches to assessing savings that are designed to cover the spectrum of project complexity:

- Option A – Partially Measured Retrofit Isolation
- Option B – Measured Retrofit Isolation
- Option C – Whole Facility
- Option D – Calibrated Simulation



Johnson Controls has used all these M&V methods and has no standard preference. Ultimately, customers will determine the guarantee method and reporting schedule. The risk / costs of each measurement and verification alternative will be discussed before a decisions are made. Attachment C includes three sample M&V reports, as requested.

j. Cost Savings Guarantee Calculations.

Our Assured Performance Guarantee works in a straightforward manner. If the energy savings are less than the guaranteed amount, we will pay the shortfall. The guarantee is monitored regularly and reconciled annually. The Assured Performance Guarantee is not a third-party insurance policy. **We are directly accountable for the financial risk.** Therefore the project is, in any event, self-funded from energy and operational savings.

The M&V process documents the performance of the various energy efficiency measures in accordance with the terms of the final contract. Under our contract, if savings calculations (made in accordance with the process as discussed above) show **excess savings** that are above and beyond those used for project justification, then those savings **are the property of our customers.** They will have thorough documentation of all additional savings.

k. ESCO Fee Calculation.

As the largest performance contracting company in the United States, we have used many fee structures to meet the needs of our clients. We look to our customers for guidance on the best way to structure a mutually acceptable contract, but suggest the use of open book pricing for projects resulting from the ODOE program. Below is the fee structure we advocate using as we negotiate our GMP (Guaranteed Max Price Contract).

Fee	Typical Fee Range	From
Design	6% - 10%	Cost of Work
Construction & Project Administration	4% - 8 %	Cost of Work
Overhead & Profit – ESCO Services	15% - 20%	Cost of Work
Start-up & Commissioning Fee	1% - 3%	Cost of Work
Training	Negotiated	Based on customer requirements
Measurement and Verification	Negotiated	Based on customer requirements

l. Open Book Pricing.

We truly feel that we have a significant advantage over all other responders regarding issues of cost. Johnson Controls is the more cost-effective choice because:

Open Book Approach – Our approach to pricing employs the most transparent model available: open book. With our extensive performance contracting experience, we are well versed in all aspects of open book, negotiated projects. All of our quotes, estimates, etc. will be shared with the customer, along with subcontractor quotes for each item. Customers will be involved in a truly transparent pricing process.

Corporate Structure – Once the Technical Energy Audit occurs and the customer has selected the most appropriate scope, we will provide preferential pricing on mechanical equipment to reduce project costs. As



a testament to our experience in the practice of pricing, we have maintained several national selling agreements with other major manufacturers for many years. The magnitude of discounts we are able to provide are related to our annual volume across North America. As a Fortune 100 company, and with the status of being the largest ESCO in the United States, our volume with all major manufacturers is significant. In many cases, JCI is their largest customer. As a result we are afforded discount levels, which are passed on to our clients, commensurate with those volumes. Additionally, with the acquisition of York International in 2005, Johnson Controls can now provide customers with manufacturer pricing benefits.

Relationships with Vendors – Johnson Controls has a very formal subcontractor outreach program. Through national selling agreements and corporate partnerships, Johnson Controls creates opportunities for preferential pricing. Also, this strong tool will help customers maximize use of M/W/ESB firms.

m. Billing and Invoices.

Typically, Johnson Controls will submit monthly invoices to the customer for their review and approval. Upon approval, the customer sends these invoices to its financial institution for payment to Johnson Controls. (Construction draws are paid by the leasing entities during the installation phase from funds in an escrowed account for our customers).

n. ECM Vendors.

All aspects of our projects, including vendors and technical solutions, are reviewed in detail with our clients before selections are made. Many times our project teams, of which the clients are a member, choose vendors or solutions based on aspects of performance data, quality, and cost implications. It's important to emphasize that Johnson Controls is vendor neutral. While Johnson Controls designs and manufactures products ranging from the widely adopted Metasys building management system to York chillers and air handling equipment, we have demonstrated success in implementing and supporting almost all competitive solutions. Johnson Controls has always protected the customer's investments in equipment by specifying the client's preferred HVAC equipment and control systems. In support of this idea, JCI has a dedicated group called Systems Integration Services that supports control systems from dozens of vendors, including Automated Logic, Honeywell, Trane and Siemens. Although our team generally produces a list of recommendations for team discussion, ultimately decisions are made as a project team focusing on the desires of our client.

o. Provision of Insurance and Performance/Payment Bond(s).

Johnson Controls will obtain and maintain the amounts of insurance required in the RFQ. We have the ability to provide any amount of insurance. Currently, Commercial General Liability Insurance and Automobile, Liability Insurance is written for no less than the following limits of liability:

- Commercial General Liability - Combined Single Limit; \$5,000,000 General Liability
- \$500,000 Product and Completed Operations Aggregate
- \$500,000 General Aggregate, other than products and completed operations
- Commercial Auto Liability - Combined Single Limit; \$500,000 each occurrence.



Johnson Controls has a \$100,000,000 single bond limit and a \$500,000,000 aggregate bond limit with Safeco Insurance Company of America. Larger bonds can be arranged on an individual project basis. Johnson Controls confirms its ability to meet the bonding requirements applicable to this project.

p. Provision of Warranties.

The typical warranty has a one-year term covering parts and labor starting at the time the facility has beneficial use or at such time as the measure is accepted, whichever occurs first. All manufacturers' warranties on equipment are transferred to our customers. Extended warranties offered by suppliers can be included. Failure to properly maintain the equipment per the manufacturer's operation and maintenance manuals may void the warranty.

q. Sustainability.

The selection of equipment and material lifecycles are a critical part of our cost analysis. Our goal is to continually achieve the lowest lifecycle cost. For example, the recycling element was part of a LEED requirement for the Clackamas County Public Services Building, and our team helped this customer achieve a LEED Silver Rating. JCI is currently practicing this function in several locations throughout Oregon and the Pacific Northwest. Regarding construction site recycling, Johnson Controls collects and segregates waste by type, contracting with recyclers for the removal and proper disposal or use of waste.

As a world-class leader in environmental sustainability, Johnson Controls is committed to the development of renewable sources of clean and sustainable energy. We frequently employ biomass, geothermal, solar, wind and other renewable sources as energy supply options for our customers. Johnson Controls takes responsibility for the design, engineering, installation, commissioning, operation and maintenance of these renewable energy solutions. We can also guarantee the energy production, which reduces risk for our customers while increasing their energy security.

Green Building Recognition – As a Charter Member of the U.S. Green Building Council's board, Johnson Controls helped develop the LEED (Leadership in Energy and Environmental Design) Green Building Rating System. With numerous staff members who are well-trained, LEED Accredited Professionals, we are able to help customers navigate the LEED rating system and certification process for both new and existing buildings. This is accomplished through web-based software exclusively developed for Johnson Controls that we call Green Compass. With this tool, we have developed a six-step process that takes building projects through the LEED certification process, while delivering high-performance green buildings. Our LEED services encompass both existing and new facilities.

Clinton Climate Initiative – Johnson Controls continues to demonstrate its commitment to the environment by joining the Clinton Climate Initiative, created by former U.S. President Bill Clinton. We are working with 17 cities around the world to develop comprehensive strategies to improve energy efficiency in both public and private sector buildings. Many of the participating cities are locations where Johnson Controls facilities and customers are located, including New York, Chicago, Houston, Los Angeles, Berlin, London, Paris, Mexico City, Sao Paulo, Seoul and Tokyo.

Solutions Navigator – Johnson Controls has a long history of bringing innovation and improvement to both public and private-sector organizations. Based on proven Six Sigma methodologies, Sustainability Solutions Navigation Sessions help customers identify the best opportunities for improving the sustainability



of their organizations, while positively impacting the “triple bottom line” of Economic Prosperity, Environmental Stewardship and Social Responsibility. Navigation Sessions make use of a specially designed “game board” assessment tool called the Solutions Navigator™ and are facilitated by certified consultants. Navigation Sessions are appropriate for groups ranging from five to fifty individuals.

Johnson Controls Sustainability Solutions Navigation Sessions provide a structured, interactive process for quickly assessing sustainability needs and practices. Sustainability Solutions Navigation Sessions help customers address a wide range of sustainability issues ranging from the design and construction of a green building, the efficiency improvement of a portfolio of facilities, or the development of an organization-wide sustainability strategic plan.

Calculation and Reporting of Emissions Reductions – When requested by our customers, we can provide a strong emissions reduction and measurement program. Here are two examples of Johnson Controls quantifying emissions reductions for customers:

For **Carroll County, Maryland**, our energy-efficient upgrades will reduce over the 15-year contract by more than 23 million kilowatt hours, which is enough electricity to power 28,000 homes in the county for one year. Carbon emissions would be reduced by 14,000 metric tons in the same period. That amount would be similar to removing about 39,000 cars from the roads in the county for one year.

For the **City of Compton, California**, our performance contracting program will help the city meet the goals of the California Global Warming Solutions Act of 2006, which establishes mandatory greenhouse gas reduction targets. The Compton project is expected to reduce 354 metric tons of carbon, which is equal to the carbon reduction benefits of planting 295 acres of pine trees.

Real-Time Carbon Counter – We have recently translated the impact of our performance contracting projects into a real-time carbon counter. This counter actually significantly understates our impact because it includes only those projects where formal guarantees were issued and ongoing monitoring and verification took place (or is taking place). For more information, please visit:

http://www.johnsoncontrols.com/publish/us/en/sustainability/environmental_stewardship.html.



