

Connecticut Department of Administrative Services Procurement Division

Energy Efficiency Retrofits and Energy Cost-Saving Services for Existing Buildings

Response from Ecosystem Energy Services

10 September 2018



ecosystem
ecosystem-energy.com

Table of Contents

1	Proposer’s Qualifications and Capability	1
2	Proposer’s Experience	5
3	Pricing and Fees	8
4	Form RFP-16	9

1 Proposer's Qualifications and Capability

Type of Firm

Corporation

Years in the Energy Business

We have been in the energy efficiency business for 25 years. Of that, we have spent the past decade offering performance contracting services nationally and in Massachusetts and New York.

Our recent accomplishments in the US include:

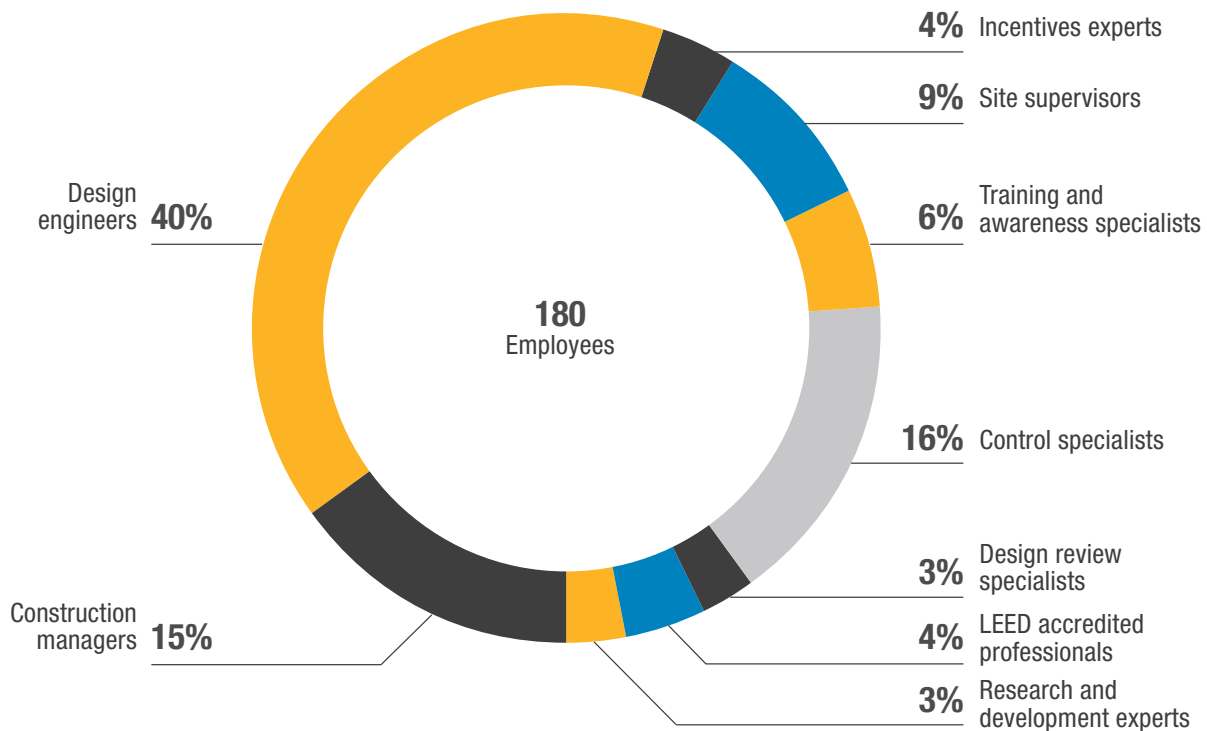
- + **In June 2018**, we were contracted by Harvard University to help advance their energy and sustainability initiatives. The project includes designing deep-dive retrofit solutions for the buildings within their Science complex. Our measures will achieve the goals most important to Harvard – reducing energy consumption and costs, GHG emissions, fossil fuel, and water usage; improving the comfort within the buildings for faculty and students; renewing aging assets in a way that delivers a return on their capital expenses; and reducing dependency on their steam network.
- + **In June 2018**, we were awarded two projects in the Boston area with Massachusetts' Division of Capital Asset Management and Maintenance worth a combined \$10 million.
- + **In December 2017**, we were selected to create a Campus Energy Master Plan for Bard College, Annandale-on-Hudson, NY, as part of NYSERDA's REV Campus Challenge Technical Assistance for Roadmaps Program.
- + **In October 2017**, Ecosystem was awarded a \$54 million multi-year project with Ohio State University.
- + **In October 2017**, Ecosystem was awarded a \$25 million project with Brown University.
- + **In August 2017**, Ecosystem was awarded a \$19 million project with Stuyvesant Town in New York City.
- + **In August 2016**, Ecosystem was awarded a \$22.5 million project with William Floyd Union Free School District, NY.
- + **In December 2015**, Ecosystem was awarded a \$5.4 million project with Mineola Central School District, NY.

- + **In August 2015**, Ecosystem was awarded an \$11.1 million project with Rockland Community College, NY.
- + **In January 2015**, Ecosystem was awarded a \$13.5 million project with Adelphi University in Garden City, New York.
- + Our project with Mount Sinai Beth Israel was the recipient of the prestigious Energy Project of the Year awards for both 2013 and 2014 from the Association of Energy Engineers and was recognized by the US Green Building Council.

Number of Full-Time Personnel

Ecosystem’s singular focus on the turnkey design, implementation, and optimization of highly efficient buildings has allowed us to build multidisciplinary teams of staff specialized for each phase of the project. These include engineers, CEMs, CMVPs, drawings experts, construction managers, site supervisors, commissioning specialists, and specialized teams dedicated to incentives, savings tracking and verification, awareness programs, and technical training programs. These in-house capabilities generate efficiencies and a communal body of knowledge that create significant value for our clients. Today we have more than 40 full-time employees in New England and New York.

The following figure provides an overview of Ecosystem’s in-house capabilities:



Our integrated teams overlap responsibilities: the construction manager joins when design is about 30 percent complete, adding implementation experience to the design process, and our designers remain involved until construction is around 80 percent complete, to ensure that any on-site changes can be implemented seamlessly.

Our project teams also include key project participants and client stakeholders for the integrative design process. This method is much more collaborative, efficient, and effective at generating value for building owners. More time is invested in quality design to maximize savings and minimize costs during implementation, communication is ongoing and highly effective, and the expertise and input of all team members is leveraged for the good of the project.

Accreditations

Ecosystem is a Department of Energy Qualified Energy Service Company.

Ecosystem is an ISO 9001-certified company in Canada, and we bring the same process-oriented rigor to our projects in the US.

In addition, Ecosystem includes more than 180 energy efficiency professionals, many of whom have industry-specific designations such as:

- + Licensed Professional Engineers (PE) in several states, including New York
- + Certified Energy Manager (CEM) from the Association of Energy Engineers
- + LEED Accredited Professional (LEED AP – various specialties) from the US Green Building Council
- + Certified Measurement & Verification Professional (CMVP) from the Efficiency Valuation Organization
- + Distributed Generation Certified Professional (DGCP) from the Association of Energy Engineers
- + Project Management Professional (PMP) from the Project Management Institute

The complete list of Ecosystem employees with these designations and copies of their certificates are available upon request.

TO DATE, ECOSYSTEM
HAS SUCCESSFULLY
DESIGNED, IMPLEMENTED,
GUARANTEED, AND
OPTIMIZED MORE THAN

250

PROJECTS WORTH

\$500M+

IN

1,400+

BUILDINGS



\$500M+

ENERGY SAVINGS
AND SOME

420,000

METRIC TONS OF
AVOIDED GREENHOUSE
GAS EMISSIONS

What Is Subcontracted

We invite qualified subcontractors and suppliers by issuing a fully defined bid package. Our goal is to ensure that we receive the best quality of labor while controlling costs. The following table indicates the types of services implemented by Ecosystem and by subcontractors in most of our projects.

Services Performed by Ecosystem and Subcontracted Services

Project Phases	% Ecosystem	% Subcontracted
Utility bill analysis	100	
Preliminary study	100	
Detailed study	100	
Concept design	100	
Schematic design	100	
Drawings and tender package	50	50
Tender	100	
Bid analysis	100	
Project management	100	
Construction management	100	
Site supervisor during construction	100	
Procurement (equipment, labor, services)	100	
Labor, trades, etc.		100
Weekly project team meetings	100	
Field review	80	20
Commissioning	100	
Optimization	100	
Project closeout	100	
Performance guarantee	100	
Ongoing support to operations	80	20
Periodic site review	100	
Monitoring and verification	100	
Reconciliation of savings	100	

2 Proposer's Experience

Types of Services Offered

Please find below a summary of Ecosystem's services. A complete list of all our services and systems capabilities is available on request.

Summary of Services Offered by Ecosystem

- + Project management
- + Energy audits
- + Project financing/third-party financing management
- + Power purchase agreement (PPA)
- + Design & engineering
- + Incentives and subsidies management
- + Drawings & bid management
- + Equipment sourcing
- + Subcontractor qualification and management
- + Construction management
- + Utilities management
- + Personnel training
- + Community awareness campaigns
- + Educational development support
- + Start-up & commissioning
- + Punch-out and contract closure documentation
- + Performance optimization
- + Monitoring & verification

Brief Description of Projects in the Last Three Years

Name and type of project	Division of Capital Assets Management and Maintenance (DCAMM) - Massachusetts Emergency Management Agency (MEMA)	
Project size	\$5,200,000	
List of improvements	<ul style="list-style-type: none"> + Aerothermal heat pump + 275 kw PV canopy + Interior lighting upgrade + Exterior lighting replacement + Lighting controls + Replace fan motors + Exhaust fan occupancy controls + BAS upgrade + Domestic water fixtures + Replace unitary HVAC equipment 	<ul style="list-style-type: none"> + Replace air handling unit + Replace constant volume air distribution with variable volume air distribution + Demand control ventilation + Real time metering + Replace pumps + Replace generators / demand response + Replace boiler + Sprinkler replacement
Annual cost savings	\$209,000	
Audit, monitoring and savings verification methodologies	State-regulated performance specification test in addition to customized Ecosystem energy savings guarantees	
Reference	Kaitlyn Menyo, DCAMM Energy Project Manager Kaitlyn.menyo@mass.gov	

Name and type of project	DCAMM Trial Courts (conditionally awarded)
Project size	\$4,513,116
List of improvements	<p>Fenton Judicial Center</p> <ul style="list-style-type: none"> + Lighting replacement + Lighting controls + Premium efficiency motors with VFD + New DDC controls + Condensing DHW heater + Plug load controllers + Right-sized condensing boilers + Alternate heat recovery <p>Lawrence Superior Court</p> <ul style="list-style-type: none"> + Lighting replacement + Lighting controls + Premium efficiency motors with VFD + New DDC controls + Condensing DHW heater + Plug load controllers + Right-sized condensing boilers + Electric chiller replacement <p>Newburyport District Court</p> <ul style="list-style-type: none"> + Lighting replacement + Lighting controls + Premium efficiency motors with VFD + Lavatory water conservation devices + Condensing DHW heater + Plug load controllers + Right-sized condensing boilers <p>Newburyport Superior Court</p> <ul style="list-style-type: none"> + Lamps, ballasts, and fixtures + New DDC controls + High efficiency boiler replacement
Annual cost savings	\$238,898
Audit, monitoring and savings verification methodologies	State regulated performance specification test in addition to customized Ecosystem energy savings guarantees
Reference	Ryan Harold, DCAMM Energy Project Manager Ryan.harold@mass.gov

Name and type of project	Mineola Union Free School District, NY
Project size	\$7,340,000
List of improvements	<ul style="list-style-type: none"> + Interior and exterior lighting upgrade + Steam to hot water conversion + New unit ventilators + Hot water boiler upgrade + Controls upgrade + Oil to gas heating conversion + Computer energy management + Solar PV
Annual cost savings	\$398,000
Audit, monitoring and savings verification methodologies	IPMVP Option C
Reference	Dr. Michael Nagler, Superintendent of Schools 516.237.2001

Name and type of project	William Floyd Union Free School District, NY
Project size	\$24,072,000
List of improvements	<ul style="list-style-type: none"> + Redesign and optimization of existing CHP microgrid + Hot water network improvements + High-efficiency boiler replacements + New CHPs + Ventilation system redesign + LED lighting redesign + Controls and BMS upgrade + Condensing DHW heaters + Unit ventilator replacement + IT energy management system
Annual cost savings	\$1,249,818
Audit, monitoring and savings verification methodologies	IPMVP Option C
Reference	Herb Hodge, Assistant Director/Clerk of the Works 631.388.3391

Name and type of project	Brown University
Project size	\$24,800,000
List of improvements	<p>Transformational campus-wide project helped Brown achieve its 42% GHG reduction goal by 2020 and includes:</p> <ul style="list-style-type: none"> + Steam to medium temperature hot water conversion + Steam hub conversion
Annual cost savings	TBC
Audit, monitoring and savings verification methodologies	Customized Ecosystem energy savings guarantees
Reference	Michael Guglielmo, VP, Facilities Management 401.863.7844 michael.guglielmo@brown.edu

Name and type of project	Stuyvesant Town, NYC
Project size	\$19,200,000
List of improvements	<ul style="list-style-type: none"> + CHP + High-efficiency boilers + Steam peak optimization + Electricity resiliency and redundancy + Electrical systems upgrade + New gas service + Centralized controls for CHP plant
Annual cost savings	\$2,600,000
Audit, monitoring and savings verification methodologies	Customized Ecosystem energy savings guarantees
Reference	Tom Feeney Vice President, Facility Operations and Engineering 212-598-5222 Tom.feeney@stuytown.com

3 Pricing and Fees

As you know, every project is different. Therefore, it is difficult to provide pricing here. For a better idea of our project cost and project savings as they relate to the combination of energy efficiency measures performed for each client, please review the project descriptions in the previous pages.

Once project scope and pricing are mutually agreed, Ecosystem is contractually obligated to deliver the promised results. Unlike most engineering companies, we do not charge a “rate times time” fee, nor do we derive our fees by getting a percentage of the total project cost. This “traditional” model offers zero incentive to align solutions with the best interests of each client; in fact, there is actually an incentive for the engineering company to build a more expensive project.

As the project design-builder, Ecosystem guarantees performance targets that are mutually established with our clients: construction costs, project schedule, savings, utility incentives, and system performance. If the targets are not reached after one year of performance monitoring, Ecosystem implements corrective measures at our own expense or reimburses the difference. We are willing to assume the project risk for our clients and confident in our ability to deliver successful projects.

Capital Cost Outlay

There is no initial capital cost outlay if the client decides to move forward with the defined project as outlined in Ecosystem’s detailed study.

We work with companies that offer financing, if desired. The borrowing rate is lower than those of traditional projects because Ecosystem guarantees our results.

Maintenance and Monitoring Costs

Monitoring is typically included in the cost of our projects, unless otherwise directed by our client. Because our project results are guaranteed, we want to monitor the project to know that it is performing at the target values established. Maintenance is offered, again at the directive of our client. The actual maintenance cost will depend on the project/equipment involved.

Incentives Management

Ecosystem has a committed team responsible for identifying and procuring all available rebates and incentives for every project we deliver. Our engineers work closely with the incentives team to maximize the amounts obtained for our clients. We guarantee the total incentives our clients will receive. Often, we manage to exceed the guaranteed total by the time a project is complete, and our clients benefit from the additional funds.

4 Form RFP-16

EXHIBIT B, RFP-16
PRICE SCHEDULE

Page 1 of 1

CONTRACT NAME:	ENERGY EFFICIENCY RETROFITS AND COST SAVINGS PROGRAMS FOR EXISTING BUILDINGS	RFP NO: 18PSX0104
----------------	--	-------------------

DESCRIPTION OF GOODS AND SERVICES OFFERED BY CONTRACTORS
--

INSTRUCTIONS: PROVIDE A DESCRIPTION OF YOUR COMPANY ALONG WITH THE GOODS AND SERVICES THAT IT INTENDS TO PROVIDE THE STATE OF CONNECTICUT THROUGH THIS CONTRACT. THIS IS THE DESCRIPTION THAT WILL APPEAR IN THE CONTRACT FOR END USERS SEEKING TO MAKE ACQUISITIONS FROM IT. THE DESCRIPTION MUST BE LIMITED TO THE SPACE PROVIDED HERE. ALL ADDITIONAL PAGES, DOCUMENTATION OR VERBIAGE WILL BE DISREGARDED AND DESCRIPTION WILL BE EDITED AT THE DISCRETION OF THE DAS CONTRACT SPECIALIST.

Table row height has been frozen. Please restrict entry to Calibri, 11-point, regular font. Navigation between rows may be accomplished only by placement of cursor with mouse or by manipulating touchpad.

ECOSYSTEM ENERGY SERVICES is an award-winning engineering firm focused on the design and delivery of high-performing energy projects. We collaborate with colleges and universities, K-12 school districts, hospitals, municipalities, and commercial, residential, and industrial buildings to develop creative solutions that maximize efficiency and improve the bottom line. Over more than 25 years, we have achieved on average 35% energy reductions as well as 105% of savings targets on active projects.
Collaboration: To achieve significant energy efficiency outcomes, we believe in the value of creating partnerships with all stakeholders, from the mechanical room to the boardroom and beyond.
Multidisciplinary teams: Our singular focus on turnkey design, implementation, and optimization of highly efficient buildings has allowed us to build in-house teams specialized for each phase of a project.
Agile execution: Our teams can design and execute complex projects on a compressed timeline since design engineers and construction managers work together for the life of the project.
Vendor neutrality: We don't sell products of our own. This allows for complete flexibility in equipment selection and the freedom to approach each project with an objectivity that puts your interests first.
The Ecosystem Guarantee: Removing the risk that typically accompanies energy projects, we guarantee the measurable outcomes that matter most, from savings, costs, and incentives, to schedule and occupant comfort.



ecosystem
ecosystem-energy.com

Boston

745 Atlantic Ave., Suite 718
Boston, MA 02111
Phone: 774.275.0077

New York

462 7th Ave., Floor 22
New York, NY 10018
Phone: 646.692.7800

Toronto

8 King Street East, Suite 910
Toronto, ON M5C 1B5
Phone: 416.649.1298

Montreal

407 McGill Street, Suite 600
Montreal, Quebec H2Y 2G3
Phone: 514.940.5156

Quebec

2875 Laurier Blvd., Suite 950
Quebec, Quebec G1V 2M2
Phone: 418.651.1257