

RFQ for Healthy Buildings and Comprehensive Energy Management Services



Finance Committee
July 14, 2021

Presentation Agenda

- Introduction
- Project Overview
- Project Goals
- Project Scope
- Q&A



Public Sector Challenges

Rising operating costs

Escalating energy costs



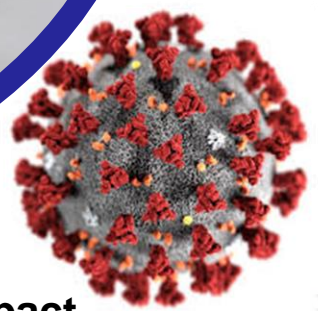
Reduced capital funding

Deferred maintenance

Renewable energy goals

Creative funding options needed

Aging infrastructure



Overburdened tax base

Pandemic Impact



Project Overview

- What is an Energy Savings Performance Contract (ESPC)?
- Why is Easthampton pursuing an ESPC?
- When is the project projected to commence?
- Where will this project take place - buildings in scope?
- How is an ESPC procured?



Energy Savings Performance Contract

ESPC:

- Under MGL Department of Energy Resources (DOER) procurement
- ESCO Partnership
- Customer defined scope and selection
- Turn-Key project
- Time and cost-effective method for completing comprehensive projects
- Performance guarantee

Benefits to Easthampton:

- Upgrade Indoor Air Quality (IAQ) given the pandemic impact
- Facilities infrastructure improvements
- Prevent/solve deferred maintenance
- Drive operational efficiency and cost savings
- Positive financial impacts
- Environmental benefits - sustainability and renewable energy
- Guarantee Easthampton's energy savings and solar production



Easthampton: Infrastructure Focus

Buildings in Scope:

- Municipal Building
- Public Safety
- Water Department
- Wastewater Plant
- High School

Timeline Summary:

- Construction estimate: Oct 2021 – Sep 2022
- Prioritize timing on Indoor Air Quality and seasonal impacted measures



Easthampton's ESPC Procurement

Massachusetts Process

- MA Department of Energy Resources (DOER) RFQ
- DOER, established by M.G.L. c. 25A, § 11i

Easthampton's DOER Timeline

- Notification to the DOER: September 2020
- RFQ published: October 2020
- Pre-submission Conference and Facility Tour: October 2020
- ESCO response submission: November 2020
- Easthampton evaluations/ESCO interviews: December 2020
- ESCO selection: January 2021 – Honeywell



Project Goals

Balanced Project which Promotes:

- Public Safety stemming from Pandemic Impact
- Healthy Buildings – Indoor Air Quality and mechanical equipment upgrades
- Energy Reduction/Cost Avoidance/Deferred Maintenance
- Sustainability – Positive Environmental Impact and Solar Energy



Project Scope \$6.16M

ECMs per Building:

ECM Description	Total Cost Per Building					
	Public Safety Complex	Municipal Building	Water Department	Wastewater Plant	Easthampton High School	Total
Chiller Replacement	\$ 203,471	\$ -	\$ -	\$ -	\$ -	\$ 203,471
Building Management System & Healthy Building Upgrades	\$ 386,568	\$ 257,331	\$ 61,819	\$ -	\$ 522,941	\$1,228,659
Demand Control Ventilation	\$ -	\$ 11,505	\$ -	\$ -	\$ -	\$ 11,505
Air Handling Unit Replacement & VAV Conversion	\$ -	\$ 812,585	\$ -	\$ -	\$ -	\$ 812,585
Kitchen Hood Controls	\$ -	\$ -	\$ -	\$ -	\$ 32,461	\$ 32,461
De-Stratification Fans with UV Lighting	\$ -	\$ -	\$ -	\$ -	\$ 21,953	\$ 21,953
LED Lighting & Control Upgrades	\$ 94,483	\$ 35,331	\$ 22,292	\$ -	\$ 32,187	\$ 184,292
Building Envelope Improvements	\$ 3,662	\$ 11,774	\$ 3,858	\$ -	\$ 23,920	\$ 43,214
Variable Frequency Drives	\$ -	\$ 15,770	\$ -	\$ -	\$ -	\$ 15,770
Walk-In Cooler & Freezer Controls	\$ -	\$ -	\$ -	\$ -	\$ 12,383	\$ 12,383
Solar Photovoltaic Systems & Electric Vehicle Charging Stations	\$1,337,024	\$ 433,580	\$ -	\$1,598,715	\$ -	\$3,369,318
Computer Power Management	\$ -	\$ 539	\$ -	\$ -	\$ 8,446	\$ 8,985
Investment Grade Energy Audit	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 222,298
Total Project Cost	\$2,025,207	\$1,578,415	\$ 87,968	\$1,598,715	\$ 654,291	\$6,166,894
Owner Controlled Contingency (5% of Project Cost Estimate)						\$ 308,345
Total Bonding						\$6,475,239



Project Details

Financial Breakdown:

ECM Description	Total Cost	Rebates YR 1. (One Time Benefit)	Net Cost	Total Annual Energy Cost Savings	Annual Solar Incentive*	Operational Savings
Chiller Replacement	\$ 203,471	\$ 621	\$ 202,850	\$ 584		\$ 5,000
Building Management System & Healthy Building Upgrades	\$ 1,228,659	\$ -	\$ 1,228,659	\$ 3,495		\$ 1,000
Demand Control Ventilation	\$ 11,505	\$ -	\$ 11,505	\$ 590		\$ -
Air Handling Unit Replacement & VAV Conversion	\$ 812,585	\$ 3,412	\$ 809,174	\$ 973		\$ 5,000
Kitchen Hood Controls	\$ 32,461	\$ 2,618	\$ 29,843	\$ 1,098		\$ -
De-Stratification Fans with UV Lighting	\$ 21,953	\$ 1,344	\$ 20,609	\$ 534		\$ -
LED Lighting & Control Upgrades	\$ 184,292	\$ 22,123	\$ 162,169	\$ 11,378		\$ 500
Building Envelope Improvements	\$ 43,214	\$ 4,890	\$ 38,325	\$ 2,375		\$ -
Variable Frequency Drives	\$ 15,770	\$ -	\$ 15,770	\$ 1,754		\$ -
Walk-In Cooler & Freezer Controls	\$ 12,383	\$ 2,197	\$ 10,186	\$ 822		\$ -
Solar Photovoltaic Systems & Electric Vehicle Charging Stations	\$ 3,369,318	\$ -	\$ 3,369,318	\$ 87,931	\$ 70,803	
Computer Power Management	\$ 8,985	\$ 4,979	\$ 4,006	\$ 7,444		\$ -
Investment Grade Energy Audit	\$ 222,298	\$ -	\$ 222,298	\$ -		\$ -
Sub-Total	\$ 6,166,894	\$ 42,183	\$ 6,124,711	\$ 118,978	\$ 70,803	\$ 11,500

* Note: Solar Incentive declines annually based on solar production degradation. 20 YR annual average of incentive estimated at \$67,538



Project Summary and Assumptions

Summary	
Estimated Energy Projects Cost	\$6,166,894
Owner Controlled Contingency (5% of Project Cost Estimate)	\$308,345
Total Bonding	\$6,475,239
Upfront Capital Contribution	\$0
Rebates (Utility - YR 1 only)	\$42,183
Inflation Rate	3.00%
Estimated Interest Rate on Bond	2.00%
Total Financed Years	20
Payments per Year	1



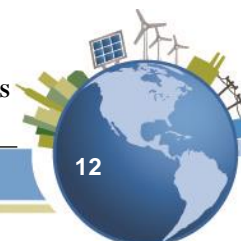
Project Cash Flow

Project Costs:	Year 1	Year 5	Year 10	Year 15	Year 20	Total
Payments (Debt Service)	\$377,147	\$377,147	\$377,147	\$377,147	\$377,147	\$7,542,940
M&V	14,404	16,211	18,793	21,787	25,257	387,029
TOTAL	391,551	393,358	395,940	398,934	402,404	7,929,969
Project Revenue Sources:						
Energy Cost Avoidance (excl solar)	\$31,048	\$34,944	\$40,510	\$46,962	\$54,442	\$834,259
Operational Cost Avoidance	\$11,500	\$12,943	\$15,005	\$17,395	\$20,165	\$309,009
Solar Energy Cost Avoidance	\$87,931	\$98,967	\$114,730	\$133,003	\$154,187	\$2,362,737
Solar Incentive	\$70,803	\$69,397	\$67,680	\$66,004	\$64,371	\$1,350,768
TOTAL	\$201,281	\$216,252	\$237,924	\$263,365	\$293,166	\$4,856,773
ANNUAL CASH FLOW	(\$190,269)	(\$177,106)	(\$158,016)	(\$135,569)	(\$109,238)	(\$3,073,197)
Cumulative Total	(\$190,269)	(\$918,987)	(\$1,748,494)	(\$2,472,675)	(\$3,073,197)	(\$3,073,197)

Contribution Cost						
Capital Cost Avoidance	\$141,311	\$141,311	\$141,311	\$141,311	\$141,311	\$2,826,215
Solar Capital Budget	\$50,588	\$50,588	\$50,588	\$50,588	\$50,588	\$1,011,751
Total	\$191,898	\$191,898	\$191,898	\$191,898	\$191,898	\$3,837,966
ANNUAL CASH FLOW	\$1,629	\$14,792	\$33,882	\$56,329	\$82,660	\$764,769
Cumulative Total	\$1,629	\$40,505	\$170,489	\$405,799	\$764,769	\$764,769

Financing assumes above stated construction period & annual payments at above stated 2.0% estimated interest rate
 This cash flow is for illustration purposes only and is not an offer to contract or finance

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Contribution Cost Detail

Contribution Cost	Year 1	Year 5	Year 10	Year 15	Year 20	Total
Capital Cost Avoidance	\$141,311	\$141,311	\$141,311	\$141,311	\$141,311	\$2,826,215
Solar Capital Budget	\$50,588	\$50,588	\$50,588	\$50,588	\$50,588	\$1,011,751
Total	\$191,898	\$191,898	\$191,898	\$191,898	\$191,898	\$3,837,966
ANNUAL CASH FLOW	\$1,629	\$14,792	\$33,882	\$56,329	\$82,660	\$764,769
Cumulative Total	\$1,629	\$40,505	\$170,489	\$405,799	\$764,769	\$764,769

Contribution Detail: Capital Cost Avoidance

ECM Description	Total Cost	Rebates YR 1. (One Time Benefit)	Net Cost	Total Annual Energy Cost Savings	Annual Solar Incentive*	Operational Savings	Justification
Chiller Replacement	\$ 203,471	\$ 621	\$ 202,850	\$ 584		\$ 5,000	Pandemic Impact - Public Safety IAQ and Air Conditioning
Building Management System & Healthy Building Upgrades	\$ 1,228,659	\$ -	\$ 1,228,659	\$ 3,495		\$ 1,000	Pandemic Impact - Public Safety IAQ
Demand Control Ventilation	\$ 11,505	\$ -	\$ 11,505	\$ 590		\$ -	Pandemic Impact - Public Safety IAQ
Air Handling Unit Replacement & VAV Conversion	\$ 812,585	\$ 3,412	\$ 809,174	\$ 973		\$ 5,000	Pandemic Impact - Public Safety IAQ and HVAC replacement
Kitchen Hood Controls	\$ 32,461	\$ 2,618	\$ 29,843	\$ 1,098		\$ -	EHS Kitchen and Occupant Safety
De-Stratification Fans with UV Lighting	\$ 21,953	\$ 1,344	\$ 20,609	\$ 534		\$ -	EHS Pandemic Impact - Public Safety IAQ
Sub-Total	\$ 2,310,634	\$ 7,995	\$ 2,302,639	\$ 7,275		\$ 11,000	
Annual Cost	\$ 141,311						

Contribution Detail: Solar Capital Budget

ECM Description	Total Cost	Rebates YR 1. (One Time Benefit)	Net Cost	Total Annual Energy Cost Savings	Annual Solar Incentive*	Operational Savings	Justification
Solar Photovoltaic Systems & Electric Vehicle Charging Stations	\$ 3,369,318	\$ -	\$ 3,369,318	\$ 87,931	\$ 70,803		
Annual Financing	\$ 206,056						
Estimated Annual Solar Incentives and Savings	\$ 155,469						
Annual Cost	\$ 50,588						Solar Canopy at Public Safety Building - Steel Commodity Impact
Total Annual Contribution	\$ 191,898						



Source of Funds

Project Funding Strategy:

- Bond
- Market Conditions

Possible Cost Offsets:

- Utility Rebates (YR 1)
- Energy Cost Avoidance (excl solar)
- Operational Cost Avoidance
- Solar Energy Cost Avoidance
- Solar Incentive
- Stimulus funds:
 - ESSER (school specific)
 - ARPA



Easthampton and Honeywell Project Partnership

Ongoing Process

- Project update meetings:
 - Mayor LaChapelle
 - Jen Gallant
 - Greg Nuttelman
 - Michael Owens
- Comprehensive engineering analysis of buildings:
 - Preliminary Audit Analysis – Completed in Feb.
 - Draft Technical Audit Report – Completed in Apr.
 - Optimized Investment Grade Audit - Completed in July
- Identify improvements:
 - Capital renewal
 - Indoor Air Quality (IAQ)
 - Energy savings
 - Energy production
 - Operational savings
 - Sustainability impact – carbon reduction



Honeywell Qualifications

Company

- Fortune 100 Global entity – US Headquartered
- Market Capitalization \$155.6 Billion (7/13/21 Market Close)

Massachusetts – local presence

- Strong regional team experience and support structure
- 325 employees
- 5 office locations
- Contribute to local economy, \$22M supplies purchased annually
- 50 completed ESPC projects
- \$150M in guarantees
- \$300M in purchases and contracts



Proven MA ESPC Performance



"I would strongly recommend Honeywell as a performance contracting company. We have found Honeywell to be a world class company, a true partner and trusted resource to the City of Worcester over the years."

Ed Augustus, City Manager, City of Worcester



We Are Excited to Be Your Partner: Team Easthampton



Thank You



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