The webinar will start momentarily....

Advanced UESC Training: Day 1 - Contracting

August 9, 2022 | 1:00 PM - 4:00 PM (EDT)

U.S. DEPARTMENT OF ENERGY

Office of ENERGY EFFICIENCY & RENEWABLE ENERGY

Advanced Utility Energy Service Contract (UESC) Training

(Day 1): Contracting and Pricing| August 9, 2022

FEMP Federal Energy Management Program

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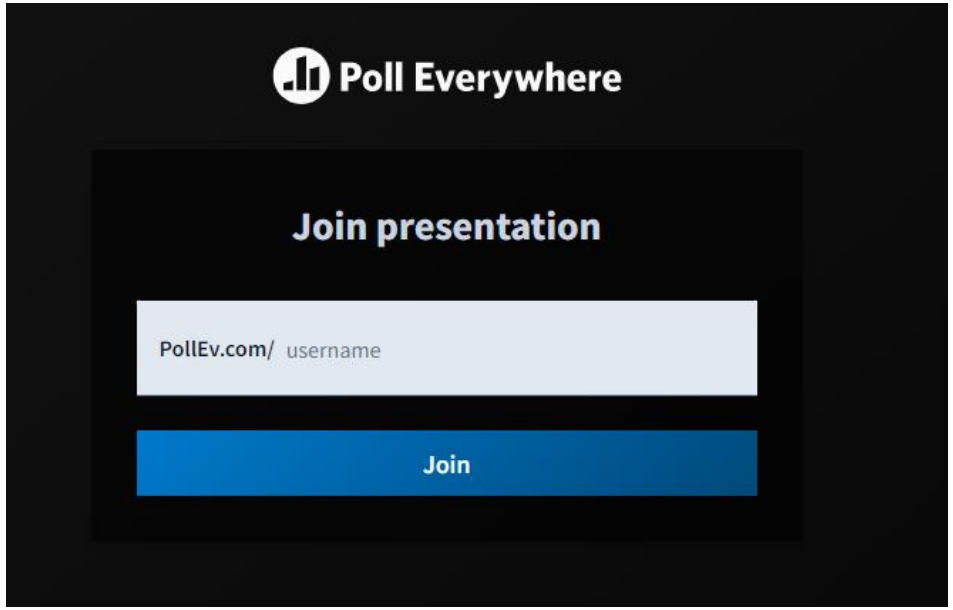
- **Call in for the best audio connection!**
- **Ensure your phone/computer is muted throughout the webinar**
- **Slides will be sent prior to and following webinar**
- **Questions will be addressed during Q&A breaks**
  - Send to all panelists in the Q&A window
  - Didn't have time for your question? Contact us through the FEMP Assistance Request Portal



www.pollev.com/lcrow118

IACET-Certified Continuing Education Units (CEU)

To Receive IACET-Certified CEUs:

- **Attend the training in full–no exceptions**
- **Within six weeks of the training (before September 20!):**
  - Complete the assessment (a minimum score of 80% is required)
  - Complete an evaluation of the training

Access the UESC Training Assessment and Evaluation

Day 1 – https://www.wbdg.org/continuing-education/femp-courses/femplw08092022

Day 2 - https://www.wbdg.org/continuing-education/femp-courses/femplw08112022

For logistical questions related to the webinar or evaluation, email Elena Meehan at elena.meehan@ee.doe.gov.

FEMP Instructor Introductions

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FEMP Federal Energy Management Program

NREL NATIONAL RENEWABLE ENERGY LABORATORY

Training Agenda

Day 1 - Contracting

- Contracting Officer Responsibilities
- UESC Pricing Proposal Review
- Determining Price Reasonableness
- Contract Management
- Resources and Q&A

Day 2 – Technical Project Development

- Decarbonization Considerations
- Project Risks & Mitigation Strategies
- Performance Assurance Planning
- Resources and Open Discussion

Day 1 Objectives

Upon completion of this course, attendees will be able to:

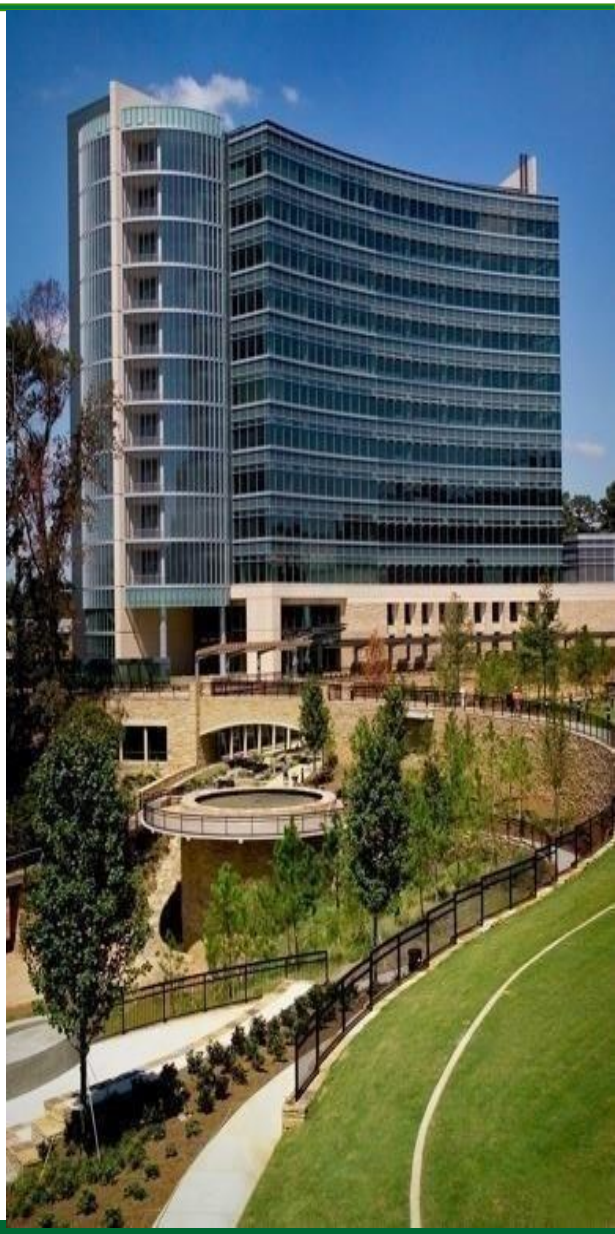
- List key Contracting Officer responsibilities for UESCs;
- Evaluate UESC proposals to ensure fair and reasonable pricing;
- Develop audit-ready procedures for UESCs;
- Utilize FEMP resources—tools, templates, training, and expertise—available for developing a UESC.

DOE Federal Energy Management Program

Mission

The Federal Energy Management Program (FEMP) works with its stakeholders to:

- Enable federal agencies to meet energy-related goals
- Identify affordable solutions
- Facilitate public-private partnerships
- Provide energy leadership to the country by identifying and leveraging government best practices



Performance Contracting

Since 1998, performance contracts have helped agencies reduce costs, energy intensity, and GHG emissions of their facilities.

Over $11.45 billion in project investments awarded
(DOE ESPC IDIQ, ESPC ENABLE, UESC)

ENERGY

Estimated over
41.9 trillion BTU
reduced annually

ECONOMIC

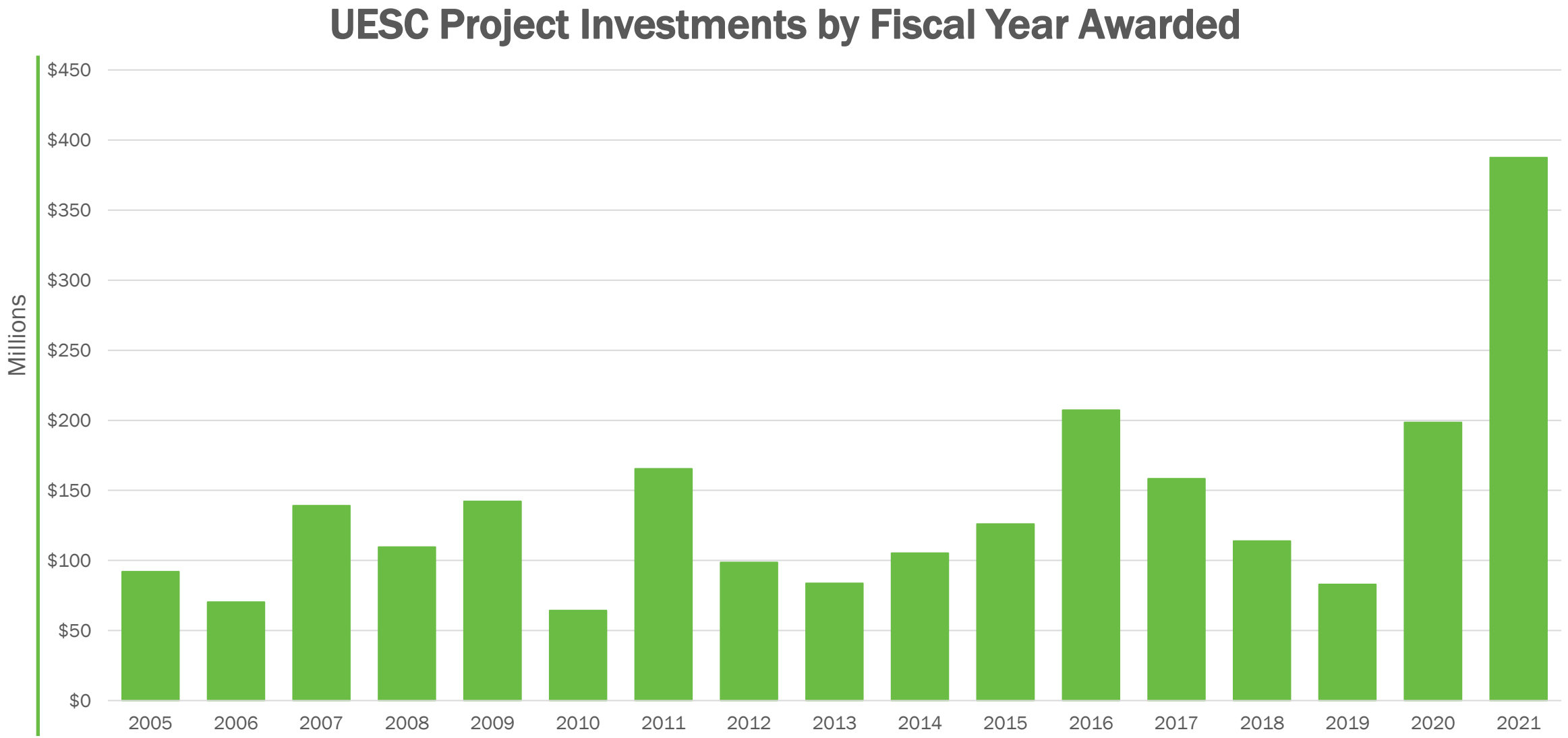
Estimated over
91,600 job-years
(direct jobs)

ENVIRONMENTAL

Estimated over
2.8 million metric tons CO_2e*
reduced annually

*Using eGrid 2019 values, inclusive of awarded projects through FY2021

2021 was a Record Year for UESC Investment



FEMP Announcements and Upcoming Events

- **Climate Smart Buildings Initiative:**
  - Will establish agency emissions reductions targets delivered through performance contracting
  - Aims to increase investments from performance contracts to $1.2 billion a year by 2030

- **New FEMP FAQs related to EA2020 Performance Contracting Requirements**
  - Federal ESPC Frequently Asked Questions on the Scope of 42 U.S.C. § 8287 et. seq. (37-40)

- **Feds-Only Performance Contracting Workshop (Aug. 10, 2022)**
  - Learn about Energy Act of 2020 performance contracting requirements and strategies for meeting new energy goals
  - Register here

THE WHITE HOUSE

BRIEFING ROOM

FACT SHEET: White House Takes Action on Climate by Accelerating Energy Efficiency Projects Across Federal Government

AUGUST 03, 2022 • STATEMENTS AND RELEASES

New Government-Wide Initiative Will Reduce Federal Energy Costs, Create Jobs, and Cut Emissions

Today, the Biden-Harris Administration announced the *Climate Smart Buildings Initiative*, which will leverage public-private partnerships to modernize Federal buildings to better meet agencies' missions, create good-paying jobs, and cut greenhouse gas (GHG) emissions. Through this initiative, the government will dramatically expand its partnership with the private sector to upgrade existing Federal buildings — paying for today's needed renovations with tomorrow's energy savings without requiring upfront taxpayer funding.

Read the full White House Fact Sheet

Energy Exchange 2022

Save the Date!

October 25-27, 2022 | Cincinnati, OH

- Theme: Advancing Federal Infrastructure through Innovation
- Sessions on UESCs and other federal energy programs
- Includes Pre-Conference UESC Workshop on October 24
- For more information, go to: energy-exchange.com

Federal Utility Partnership Working Group (FUPWG)

Save the Date!

May 3-4, 2023 | Washington D.C. area

- Led by FEMP to cultivate lasting partnerships between federal agencies and utilities for improved energy and water management.
- Seminars typically held once or twice a year
- Includes training and sessions led by industry experts
- Knowledge sharing around new technologies, best practices, and approaches to achieving energy goals

Visit the FEMP Website to Sign Up for Updates

Federal-Utility Collaboration

Presentations from Past Seminars

UESC Intro and Review

FEMP Advanced UESC Training

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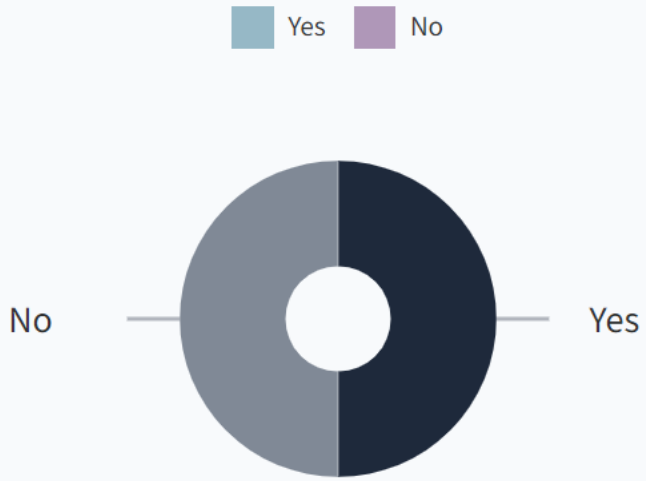
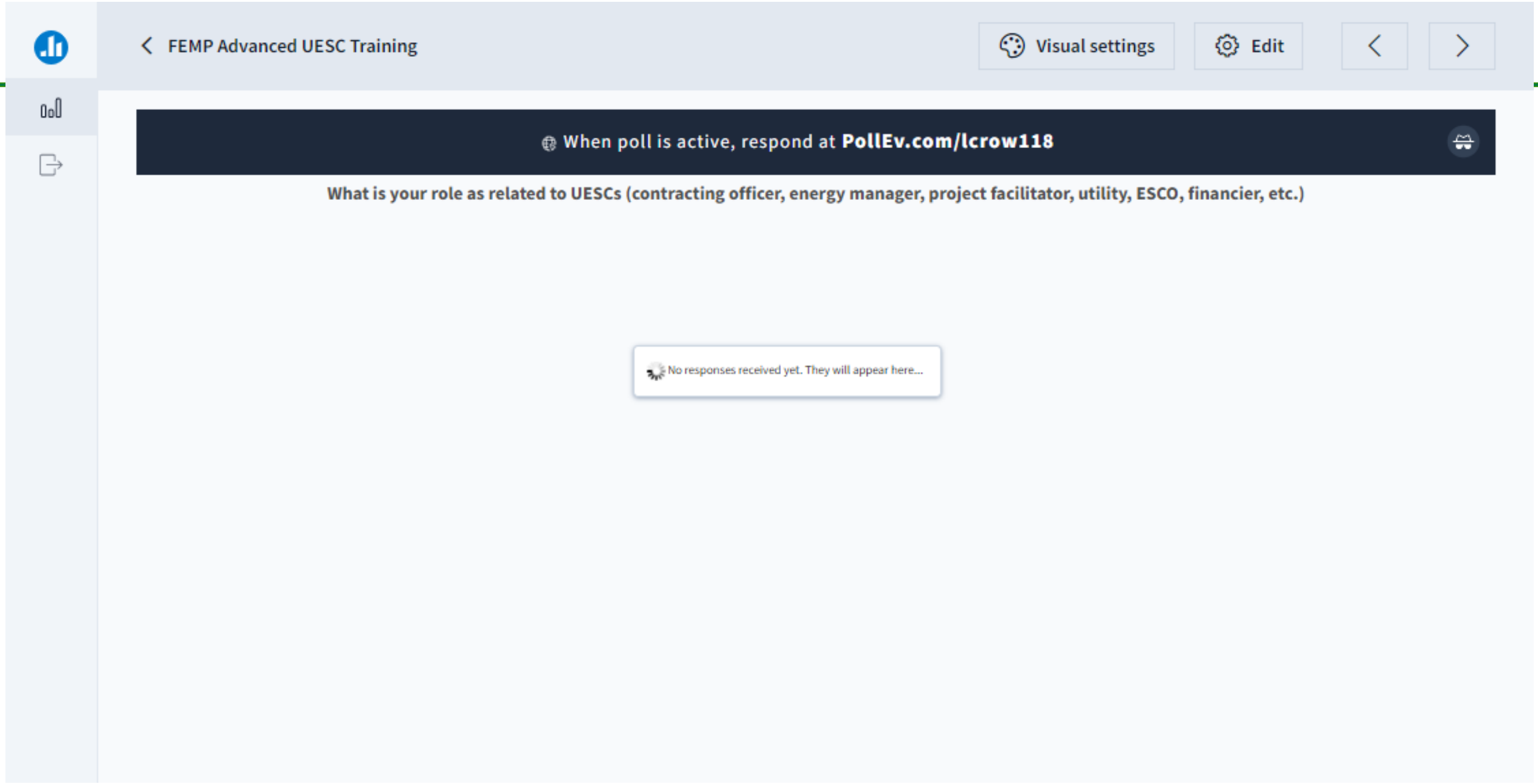
Respond at **PollEv.com/lcrow118**

Have you attended a UESC training before?




FEMP Advanced UESC Training
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When poll is active, respond at PollEv.com/lcrow118
What is your role as related to UESCs (contracting officer, energy manager, project facilitator, utility, ESCO, financier, etc.)
No responses received yet. They will appear here...

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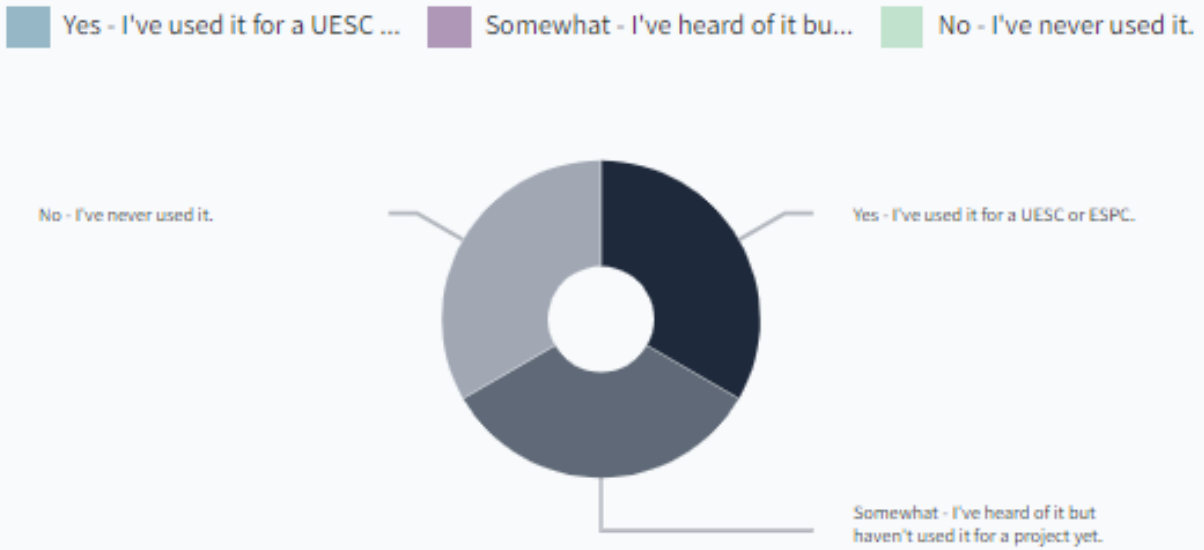
When poll is active, respond at **PollEv.com/lcrow118**

Are you familiar with eProject Builder?



What is a UESC?

A limited-source contract between a federal agency and serving utility for energy and water infrastructure improvements.

Key Features of the Contract

Objective: Achieve energy savings & related benefits

- Energy Conservation Measures (ECMs) must produce measurable energy, water, or demand reduction
- Multiple sites/facilities may be included in a single task order
- Performance Assurance Plan is required - may include O&M, repair & replacement
- Contracts are firm-fixed-price
- Max contract term is 25 years (starting with contract award)
- Agencies may use 100% financing or any combination of financing and appropriations
  - Obtaining project financing is the utility's responsibility
  - Agency makes UESC payments through energy savings and/or available agency funds

Energy Conservation Measures (ECMs)

ECMs must produce measurable energy, water, or demand reduction.

- Boiler and chiller upgrades
- Energy management control systems
- Commissioning/Retro-commissioning
- Building envelope
- HVAC
- Chilled/hot water, steam distribution
- Lighting and lighting control improvements
- Electric motors/drives
- Refrigeration
- Renewable Energy Systems
- Water and wastewater
- Electrical peak shaving/load shifting
- Rate adjustments
- Appliance/plug load reductions
- Energy consuming devices and support structures

The UESC Project Development and Implementation Process

1 Acquisition Planning

- Agency effort to define the initial project scope and acquisition strategy

2 Utility Selection & PA

- Utility Selection
- Preliminary Assessment (PA)
- PA Review and Decision to Continue

3 Project Development

- Investment Grade Audit (IGA) and Performance Assurance Plan
- UESC Task Order and Award
- Notice to proceed to final design and construction

4 Implementation and Construction

- Final Design and Construction
- Commissioning and Performance Verification
- Project Acceptance

5 Post-Acceptance Performance

- Invoicing & Payments
- Performance assurance services and reports as assigned in task order

Contracting Officer Responsibilities for UESCs

Contracting Officer (CO) Responsibilities

Overall CO responsibilities for UESCs:

- Authorizes the federal agency to enter into, administer, or terminate the contract
- May bind the Government only to the extent of the authority delegated to them
- Ensures all requirements of law, executive orders, regulations, and all other applicable procedures, including clearances and approvals, have been met
- Ensure contractors receive impartial, fair, and equitable treatment
- Request and consider the advice of specialists in audit, law, engineering, information security, transportation, and other fields, as appropriate
- Designate and authorize in writing in accordance with agency procedures, a contracting officer's representative (COR)

The CO plays a critical role in keeping the project on schedule through timely reviews of submittals and consistent engagement with the agency team.

CO Responsibilities: Acquisition Planning

1. Acquisition Planning
2. Utility Selection & PA
3. Project Development
4. Implementation and Construction
5. Post-Acceptance Performance

Responsibilities:

- Review the acquisition history of supplies and services
- Ensure acquisition has a description of supplies, including, when necessary for adequate description, a picture, drawing, diagram, or other graphic representation
- Ensure acquisition plan is approved at levels commensurate with agency procedures

Best Practices - Early engagement with site staff:

- Discuss/evaluate contracting options (UESC, ESPC, etc.)
- Form team early and ensure all reviewers/approvers are informed on the procurement

CO Responsibilities: Utility Selection and PA

1. Acquisition Planning
2. **Utility Selection & PA**
3. Project Development
4. Implementation and Construction
5. Post-Acceptance Performance

Responsibilities:

- Notify eligible utilities of UESC opportunity - Letter of Interest and Sources Sought Notice on SAM.gov
- Lead utility selection efforts
- Evaluate/select contract mechanism (AWC if available, BOA, master agreement, other)
- Provide utility with Notice to Proceed for PA
- After PA review, issue Notice to Proceed for IGA or notify utility that the site is not moving forward

CO Responsibilities: Project Development

1. Acquisition Planning
2. Utility Selection & PA
3. **Project Development**
4. Implementation and Construction
5. Post-Acceptance Performance

Responsibilities:

- **Participate in IGA kick-off meeting and progress reviews**
  - Includes regular status meetings and periodic workshops
  - Engage legal and other reviewers as necessary
- **Issue TO RFP and lead process to award:**
  - Determine fair and reasonable pricing and document price analysis
  - Lead negotiations with utility and issue Price Negotiation Memorandum
  - Coordinate with subject matter technical experts
  - Ensure outstanding technical/price issues are addressed prior to award
  - Issue/finalize J&A (when applicable)
- **Award contract**
  - Provide award letter
  - Congressional and public announcements

CO Responsibilities: Implementation & Construction

1. Acquisition Planning
2. Utility Selection & PA
3. Project Development
4. **Implementation and Construction**
5. Post-Acceptance Performance

Responsibilities:

- Participate in construction kick-off meeting
- Approve contractor submittals
- Coordinate with COR/construction manager on any changes
- Execute modifications (if any)
- Execute acceptance modification

CO Responsibilities: Post-Acceptance Performance

1. Acquisition Planning
2. Utility Selection & PA
3. Project Development
4. Implementation and Construction
5. Post-Acceptance Performance

Responsibilities:

- **Coordinate with onsite COR**
  - Verify completion of performance period services and performance assurance activities
- **Approve payment invoices**
- **Execute payment modifications**
- **Execute modifications due to contract changes (if any)**
- **Perform contract closeout procedures**
  - Notify utility that TO is physically complete (FAR 4.804-4)
  - Complete equipment title transfer from utility if not transferred at acceptance
  - Submit CPARs evaluation

Pricing Proposal Review

UESC Proposal Contents

Technical information

- Executive Summary/Project Overview
- ECM descriptions
- Energy, water, and cost savings calculations by ECM
- Performance Assurance Plan
  - ECM Performance Measurement
  - Operations, maintenance, repair and replacement requirements and responsibilities
  - ECM training
- Project management plan

Pricing information

- Task Order financial schedules
- Financing summary
- Supporting cost information

UESC Pricing Review

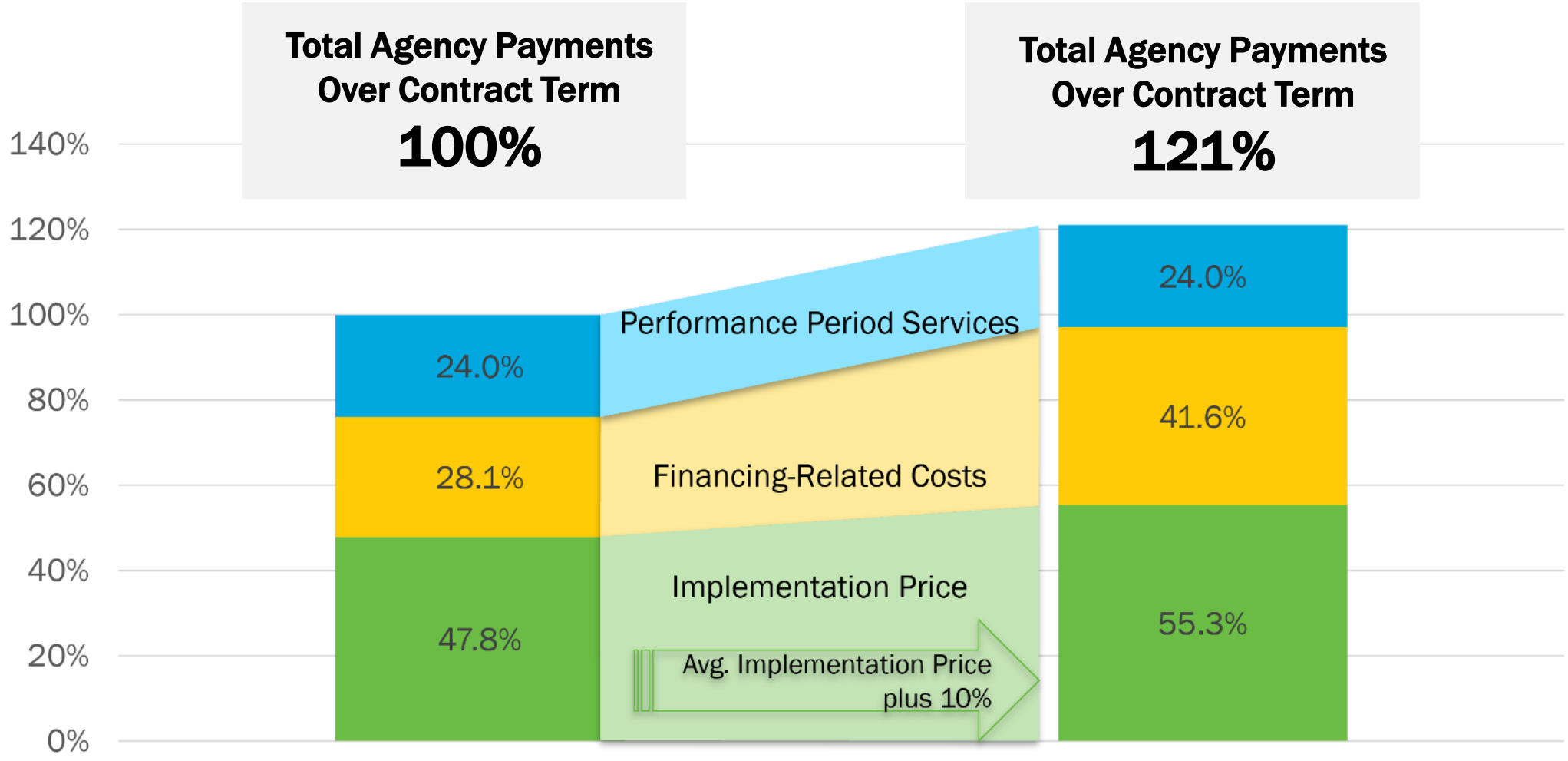
- Elements of UESC Pricing
- Task Order (TO) Financial Schedules
- Price Review Strategies
- Determining Price Reasonableness

Disclaimer: *It is not the objective of this training to provide definitive pricing advice. Rather, DOE FEMP is providing best practices and educating on the components that go into the pricing of these projects. Agencies should follow their agency-specific guidelines and requirements for making price reasonableness determinations.*

Cost Elements of a UESC

Project Development	• PA (typically provided at no-cost), IGA with Performance Assurance Plan, and other costs through TO award
Costs of Goods & Services	• Direct construction costs by Energy Conservation Measure (ECM)
Mark-Up	• Overhead & Profit for implementation expenses and performance period services
Financing	• Financing procurement costs, interest
Performance-Period Services	• Contract administration and performance assurance services

Implementation Price Impacts on TO Payments



Data: Avg. DOE IDIQ ESPCs

Pricing Review – Preliminary Assessment

1. Acquisition Planning
2. **Utility Selection & PA**
3. Project Development
4. Implementation and Construction
5. Post-Acceptance Performance

A Preliminary Assessment (PA) is a high-level, broad energy assessment ("Level I Audit") to describe existing conditions and identify potential energy efficiency, distributed energy and water opportunities

Pricing Review Considerations

- **Costs and savings in PA are very rough estimates**
- **Goal is to ensure general feasibility of ECMs**
  - Unrealistically low estimates: may determine later that high-priority ECMs must be dropped
  - Unrealistically high estimates: high priority ECMs may not appear feasible
- **Use of eProject Builder (ePB) is recommended to summarize results**

Pricing Review – IGA and Task Order Proposal

1. Acquisition Planning
2. Utility Selection & PA
3. **Project Development**
4. Implementation and Construction
5. Post-Acceptance Performance

The Investment Grade Audit (IGA) is a detailed engineering analysis, design, and cost estimate that serves as the technical foundation for the UESC task order proposal

Pricing Review Considerations

- Includes ECM implementation costs, savings calculations, and performance period costs (performance assurance activities)
- Goal is to determine final ECM package and ensure savings exceed payments over the life of the contract
- Includes financing proposal (at least 3 bids recommended)
- Require use of ePB when possible

IGA Pricing and Supporting Details

1. Acquisition Planning
2. Utility Selection & PA
3. **Project Development**
4. Implementation and Construction
5. Post-Acceptance Performance

IGA Price - summary of expenses for project development through task order award

IGA Expenses

- Field work for IGA
- Preliminary design activities (required to set project price)
- Project management
- Subcontracts (if any)
- Equipment for metering, monitoring, etc.
- Travel and expenses

Evaluating Costs Using Task Order Financial Schedules

Task order schedules are used to easily summarize project data and provide answers to critical questions:

- What ECMs are in the project?
- How much does each ECM cost and save?
- When and how much are payments?
- What will the price be to terminate the contract?

May also be used to compare different project scenarios:

- How would an interest rate change impact a project?
- How would a capital contribution impact the project (reduce term, increase ECMs, benefit resilience, etc.)?
- How would project be impacted by additional performance assurance services?

SCHEDULE #2a
IMPLEMENTATION PRICE BY ENERGY CONSERVATION MEASURE

ECM - Technology Category*	(a) Implementation Cost (Direct)*	(b) Mark-up (Overhead & Profit)	(c) Applied Incentives	(d) Implementation Price PDP + [a+b] - c
Project Development Price (PDP)-Technical Energy Audit and Project Proposal				$600,000
Building Automation Systems/Energy Management Control Systems (EMCS)	$2,500,000	$500,000	$150,000	$2,850,000
Chiller Plant Improvements	$2,600,000	$520,000	$260,000	$2,860,000
Appliance/Plug load reductions	$1,000,000	$200,000		$1,200,000
Electric Motors and Drives	$1,200,000	$240,000	$150,000	$1,290,000
Distributed Generation	$8,000,000	$1,600,000		$9,600,000
Refrigeration	$1,500,000	$300,000		$1,800,000

eProjectBuilder

eProject Builder (ePB)

Secure web-based energy project tracking/reporting

- **Free tool maintained by LBNL for U.S. DOE**
- **ePB enables contractors and their customers to securely:**
  - Preserve and track project information in perpetuity
  - Develop project scenarios using standardized calculations
  - Output financial schedules, M&V reports, analysis on portfolio of projects
  - Compare proposed projects against historical ones
- **Utility (or ESCO) may populate data and submit documentation for approval**
- **FEMP recommends use of ePB, but it's important to check your agency policy**

eProjectBuilder

eprojectbuilder.lbl.gov

Need Help?

epb-support@lbl.gov

On-Demand Training

ePB for UESCs: Enhancing Project Comprehension and Transparency with eProject Builder

Recommended TO Financial Schedules

TO Financial Schedule	Description
Summary	Summary of basic project information - Overall costs & financials, capitalization
Cost Savings and Payments	*Conceptual* cost savings and payments in PA; *Detailed estimate* of cost savings and payments in IGA/proposal
Implementation Pricing (by ECM)	Installed cost, description, technology category and scope of each ECM
Performance Period Cash Flow	Cash flow for every performance year
First Year Estimated Cost Savings by ECM	Year 1 energy and cost savings for each ECM
Cancellation Ceilings	In accordance with FAR Part 17.1 for multi-year contracts
Annual Dollar Savings Escalation Rates	Escalation rate for each utility and all performance years

Project Summary – Basic Project Information

Example Summary Information

ePB Summary Schedule

Project Capitalization	
Total Implementation Price	$20,200,000
PLUS Financing Procurement Price-capitalized construction period interest ($)*	$400,000
PLUS Financing Procurement Price-other expenses ($)*	$20,000
LESS Implementation Period Payments (from Schedule-1, (c))	$200,000
Total Amount Financed (principal)	$20,420,000
Bonded Amount	$15,400,000
Start date of Performance Period (mm/dd/yyyy)	5/28/2022
Project Financial Summary	
Annual Estimated Energy Savings (MMBtu)	45,292
Annual Estimated Water Savings (kGal)	20,000
Total Estimated Cost Savings	$32,041,581
Total Guaranteed Cost Savings	$0
Total Payments	$30,621,647

What should be included?

- **High-level snapshot of key project information**
  - Contact information and general site characteristics
  - Project capitalization summary and overall costs
  - Financing summary
  - Overall savings (energy and water)
- **Backup information should be provided in accompanying task order financial schedules**

Annual Cost Savings and Payments

Example Annual Costs & Payments

ePB schedule 1u

Implementation Period (Year 0)	(a) Estimated Cost Savings*	(c) Payments*	
	$200,000	$200,000	
Performance Period (Year)	(d) Estimated Annual Cost Savings	(f) Annual Payments	(g) Annual Dollar Savings Retained by Customer
1	$1,310,534	$1,310,533	$1
2	$2,323,979	$2,323,978	$1
3	$1,328,048	$1,328,047	$1
4	$1,364,003	$1,364,002	$1
5	$1,400,944	$1,400,943	$1
6	$1,438,897	$1,438,896	$1
7	$1,477,892	$1,477,891	$1
8	$1,517,956	$1,517,955	$1
9	$1,559,120	$1,559,119	$1
10	$1,601,414	$1,601,413	$1
11	$1,644,870	$1,644,869	$1
12	$1,689,521	$1,689,520	$1
13	$1,735,398	$1,735,397	$1
14	$1,782,538	$1,782,537	$1
15	$1,830,974	$1,830,973	$1
16	$1,880,744	$1,880,743	$1
17	$1,931,884	$1,931,883	$1
18	$1,984,433	$1,984,432	$1
19	$2,038,430	$2,038,429	$1
Total Performance Period:	$31,841,581	$31,841,562	$19
Total Implementation & Performance Period		Total Payments (c+f)	
		$32,041,562	

What should be included?

- Implementation/construction period cost savings and payments
- Performance period annual cost savings and payments (for each year of contract)
- Annual savings retained by agency

ECM Implementation Pricing

Typical Direct Implementation Costs for UESCs

- Final design
- Project Management
- Sub-contractor costs
- Utility self-performed work
- Other direct purchases
- Performance and payment bonds
- Commissioning and training

What should be included?

- Individual ECM name/number
- Direct implementation cost
- Mark-up (overhead and profit)
- Incentives (when applicable)

Back-up detail for all costs should be included in price proposal (detail for labor, materials, all other direct costs)

ECM Implementation Pricing - Example

Example – ePB Schedule 2a

ECM - Technology Category*	ECM No.	ECM Description – Title*	ECM Size	ECM Coverage (%)	Location	(a)	(b)	(c)	(d)
						Implementation Cost (Direct)*	Mark-up (Overhead & Profit)	Applied Incentives	Implementation Price PDP + [a+b] - c
Project Development Price (PDP)-Technical Energy Audit and Project Proposal									$600,000
Building Automation Systems/Energy Management Control Systems (EMCS)	14.3	Building EMIS	499 SF 3000 points	60.00%	1, 3, 101,150	$2,500,000	$500,000	$150,000	$2,850,000
Chiller Plant Improvements	12.2	Three 900-ton centrifs	Plants Y and Z	40.00%	101,150, 175, 200	$2,600,000	$520,000	$260,000	$2,860,000
Appliance/Plug load reductions	A-8	Misers, computer equipment	3200 ponts	50.00%	1, 3, 101,150,	$1,000,000	$200,000		$1,200,000
Electric Motors and Drives	19.1	VFDs	160 drives	100.00%	101, 150	$1,200,000	$240,000	$150,000	$1,290,000
Distributed Generation	DG-23	CHP	700kw	100.00%	1, 3, 101,150,	$8,000,000	$1,600,000		$9,600,000
Refrigeration	R-9	Upgrade and replace refirigeration units	45 refrig units	100.00%	1, 3, 101,150,	$1,500,000	$300,000		$1,800,000
TOTALS:						$16,800,000	$3,360,000	$560,000	$20,200,000

Performance Period Pricing

Example – Year 1
Performance Period Expenses
(from ePB Schedule 3)

Management/Administration	$25,000
Operation	$30,000
Maintenance	$5,000
Repair and Replacement	
Performance Assurance	$32,000
Other PP Expense 1: Other	$300
Other PP Expense 2: Other	$500
SUBTOTAL Before Application of Mark-up	$92,800
Mark-up (Overhead & Profit %)	20.00%
Mark-up (Overhead & Profit-$)	$18,560.00
TOTAL Performance Period Price (b)	$111,360

What is typically included?

- Management/Administration costs
- Operations and Maintenance (labor/materials, if assigned in TO)
- Repair and Replacement (labor/materials)
- Performance assurance services assigned in TO
- Mark-up (overhead and profit)

Annual Cash Flow

Example – Performance Period Cash Flow (ePB Schedule 3)

Years 13-25 not visible

	Term (year)	Implementation Period (Year 0)	1	2	3	4	5	6	7	8	9	10	11	12	Totals
Debt Service/Performance Period Payments	Principal Repayment		$423,055	$1,505,599	$556,404	$609,932	$666,305	$725,653	$788,109	$853,807	$922,899	$995,529	$1,071,854	$1,152,041	$20,420,000
	Performance Period Incentives and Other Payments		$50,000	$1,000,000											$1,050,000
	Dollar savings retained by customer		$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
	Interest ($)		$686,803	$635,093	$615,983	$595,034	$572,150	$547,227	$520,159	$490,835	$459,137	$424,945	$388,132	$348,565	$7,383,795
	Total Debt Service (a)		$1,109,858	$2,140,692	$1,172,387	$1,204,966	$1,238,455	$1,272,880	$1,308,268	$1,344,642	$1,382,036	$1,420,474	$1,459,986	$1,500,606	$27,803,795
Performance Period Expenses	Management/Administration		$25,000	$25,500	$26,010	$26,530	$27,061	$27,602	$28,154	$28,717	$29,291	$29,877	$30,475	$31,085	$644,591
	Operation		$30,000	$30,600	$31,212	$31,836	$32,473	$33,122	$33,784	$34,460	$35,149	$35,852	$36,569	$37,300	$773,487
	Maintenance		$5,000	$5,100	$5,202	$5,306	$5,412	$5,520	$5,630	$5,743	$5,858	$5,975	$6,095	$6,217	$128,913
	Repair and Replacement			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$65,000
	Measurement and Verification		$32,000	$32,640	$33,293	$33,959	$34,638	$35,331	$36,038	$36,759	$37,494	$38,244	$39,009	$39,789	$825,090
	Other PP Expense 1: Other		$300	$300	$300	$300	$300	$300	$300	$300	$300	$300	$300	$300	$6,300
	Other PP Expense 2: Other		$500	$500	$500	$500	$500	$500	$500	$500	$500	$500	$500	$500	$10,500
	SUBTOTAL Before Application of Mark-up		$92,800	$94,640	$96,517	$98,431	$100,384	$102,375	$104,406	$106,479	$108,592	$110,748	$112,948	$115,191	$2,453,881
	Mark-up (Overhead & Profit %)		20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	
	Mark-up (Overhead & Profit-$)		$18,560.00	$18,928.00	$19,303.00	$19,686.00	$20,077.00	$20,475.00	$20,881.00	$21,296.00	$21,718.00	$22,150.00	$22,590.00	$23,038.00	$490,777
	TOTAL Performance Period Price (b)		$111,360	$113,568	$115,820	$118,117	$120,461	$122,850	$125,287	$127,775	$130,310	$132,898	$135,538	$138,229	$2,944,658
Annual Cash Flow (Performance Period)	*TOTAL - ANNUAL PAYMENTS (a)+(b)*	$200,000	$1,221,218	$2,254,260	$1,288,207	$1,323,083	$1,358,916	$1,395,730	$1,433,555	$1,472,417	$1,512,346	$1,553,372	$1,595,524	$1,638,835	$30,621,647

Debt Service

- Annual principal and interest payments
- Planned one-time payments (ex.- avoided equipment replacement costs)
- Performance period incentives (ex.- demand response payments)

Performance Period Expenses

- Management/Administration costs
- Operations and Maintenance
- Repair and Replacement
- Performance assurance services assigned in TO
- Mark-up

Annual Estimated Cost Savings by ECM

Example – First Year Estimated Cost Savings (ePB Schedule 4)

ECM		Baseline Energy and Non-energy Consumption				b1	b2	c1	c2	d1	d2	e1a	e2a	e2b	f = 0.003412*b1+d1+e1a+e1b	g = b2+c2+d2+e2a+e2b	h	i	j	l = g+i+j+k	m	n = m/l
ECM Number	Short Description	Baseline electricity use	Baseline electricity demand	Baseline natural gas use	Baseline Use: Heating Oil	Electric energy savings	Electric energy savings	Electric demand savings	Electric demand savings	Natural gas savings	Natural gas savings	Other Savings Type 1: Heating Oil	Other Savings Type 1: Heating Oil	Other Savings Type 2: Purchased Steam	Total energy savings	Total energy cost savings	Water savings	Water savings	O&M cost savings	Estimated annual cost savings	Implementation price	Simple Payback
		(kWh/yr)	(kW/mo)	(MMBtu/yr)	(MMBtu/yr)	(kWh/yr)	($/yr)	(kW/mo)	($/yr)	(MMBtu/yr)	($/yr)	(MMBtu/yr)	($/yr)	($/yr)	(MMBtu/yr)	($/yr)	(Kgal/yr)	($/yr)	($/yr)	($/yr)	($)	(years)
	Project Development Price (PDP)–Technical Energy Audit and Project Proposal																				$600,000	
14.3	Building EMIS			37,047	37,042	1,600,000	$120,000		$30,000	(8,300)	-$49,800	9,100	$50,000	$40,000	6,253	$190,200				$190,200	$2,850,000	14.98
12.2	Three 900-ton centrifs	9,160,000				1,000,000	$75,000		$15,000						3,412	$90,000				$90,000	$2,860,000	31.78
A-8	Misers, computer equipment	15,356,000				1,200,000	$80,000	3,000							4,094	$80,000			$40,000	$120,000	$1,200,000	10.00
19.1	VFDs	11,866,000	500	20,000	30,000	900,000	$60,000	50	$1,800	710	$4,260	1,065	$19,495	$23,233	4,846	$108,788				$108,788	$1,290,000	11.86
DG-23	CHP					7,000,000	$450,000		$75,000			1,432	$75,000		25,316	$600,000				$600,000	$9,600,000	16.00
R-9	Upgrade and replace refirigeration units					400,000	$30,000								1,365	$30,000	20,000	$120,000		$150,000	$1,800,000	12.00
TOTALS:		36,382,000	500	57,047	67,042	$12,100,000	$815,000	3,050	$121,800	-7,590	-$45,540	11,597	$144,495	$63,233	45,292	$1,098,988	20,000	$120,000	$40,000	$1,258,988	$20,200,000	16.04

What should be included?

- Individual ECM name/number
- Baseline energy and water use
- Energy and water savings
  - Electric (kWh/yr and $/yr)
  - Natural gas (MMBtu/yr and $/yr)
  - Water (Kgal/yr and $/yr)
- Related O&M savings
- Other non-energy cost savings
- Total estimated annual cost savings ($/yr)
- ECM Simple payback (implementation price ÷ annual cost savings)

Cancellation Ceilings

Cancellation ceilings establish the maximum termination liability for a specific time period (year and month of contract)

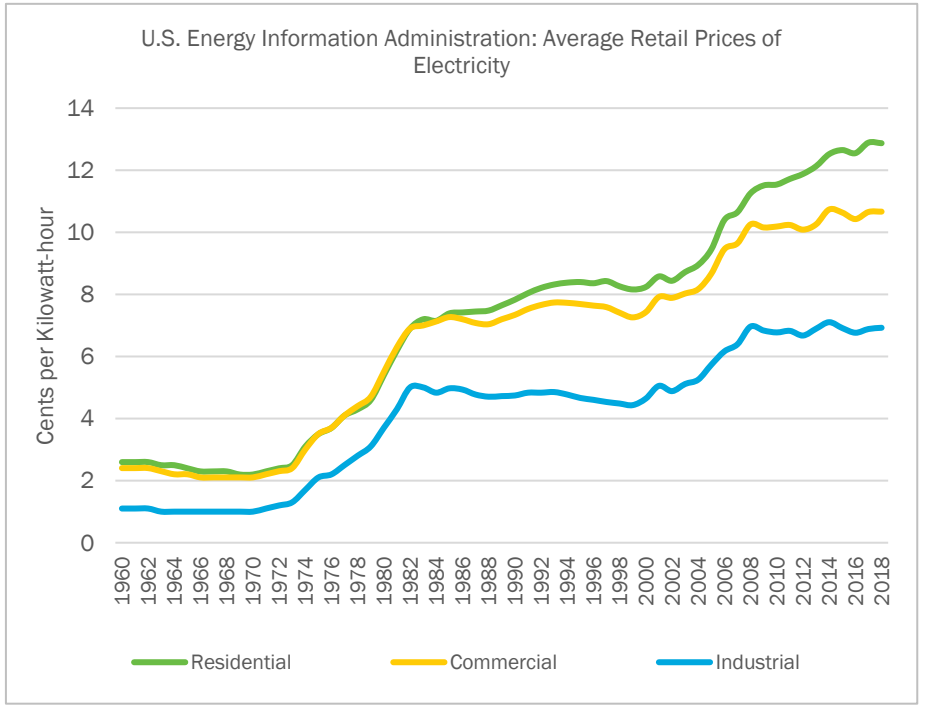
- Includes remaining principal of total amount financed plus any prepayment charges

End of Performance Period (Year)	1	2	3	4	5	6	7	8	9	10	11	12
Project Acceptance	$1,409,000	$1,338,550	$1,271,623	$1,208,041	$1,147,639	$1,090,257	$1,035,744	$983,957	$934,759	$888,021	$843,620	$801,439
1	$1,268,100	$1,204,695	$1,144,460	$1,087,237	$1,032,875	$981,232	$932,170	$885,562	$841,283	$799,219	$759,258	$721,295
2	$1,141,290	$1,084,226	$1,030,014	$978,514	$929,588	$883,108	$838,953	$797,005	$757,155	$719,297	$683,332	$649,166
3	$1,027,161	$975,803	$927,013	$880,662	$836,629	$794,798	$755,058	$717,305	$681,440	$647,368	$614,999	$584,249
4	$924,445	$878,223	$834,312	$792,596	$752,966	$715,318	$679,552	$645,574	$613,296	$582,631	$553,499	$525,824
5	$832,000	$790,400	$750,880	$713,336	$677,670	$643,786	$611,597	$581,017	$551,966	$524,368	$498,149	$473,242
6	$748,800	$711,360	$675,792	$642,003	$609,903	$579,407	$550,437	$522,915	$496,769	$471,931	$448,334	$425,918
7	$673,920	$640,224	$608,213	$577,802	$548,912	$521,467	$495,393	$470,624	$447,093	$424,738	$403,501	$383,326
8	$606,528	$576,202	$547,392	$520,022	$494,021	$469,320	$445,854	$423,561	$402,383	$382,264	$363,151	$344,993
9	$545,875	$518,582	$492,653	$468,020	$444,619	$422,388	$401,269	$381,205	$362,145	$344,038	$326,836	$310,494
10	$491,288	$466,724	$443,387	$421,218	$400,157	$380,149	$361,142	$343,085	$325,930	$309,634	$294,152	$279,445
11	$442,159	$420,051	$399,049	$379,096	$360,141	$342,134	$325,028	$308,776	$293,337	$278,671	$264,737	$251,500
12	$397,943	$378,046	$359,144	$341,187	$324,127	$307,921	$292,525	$277,899	$264,004	$250,803	$238,263	$226,350
13	$358,149	$340,241	$323,229	$307,068	$291,715	$277,129	$263,272	$250,109	$237,603	$225,723	$214,437	$203,715
14	$322,334	$306,217	$290,906	$276,361	$262,543	$249,416	$236,945	$225,098	$213,843	$203,151	$192,993	$183,344
15	$290,101	$275,596	$261,816	$248,725	$236,289	$224,474	$213,251	$202,588	$192,459	$182,836	$173,694	$165,009
16	$261,091	$248,036	$235,634	$223,853	$212,660	$202,027	$191,926	$182,329	$173,213	$164,552	$156,325	$148,508
17	$234,981	$223,232	$212,071	$201,467	$191,394	$181,824	$172,733	$164,096	$155,892	$148,097	$140,692	$133,657
18	$211,483	$200,909	$190,864	$181,321	$172,255	$163,642	$155,460	$147,687	$140,302	$133,287	$126,623	$120,292
19	$190,335	$180,818	$171,777	$163,188	$155,029	$147,278	$139,914	$132,918	$126,272	$119,959	$113,961	$108,263
20	$171,302	$162,736	$154,600	$146,870	$139,526	$132,550	$125,922	$119,626	$113,645	$107,963	$102,565	$97,436
21	$154,171	$146,463	$139,140	$132,183	$125,574	$119,295	$113,330	$107,664	$102,280	$97,166	$92,308	$87,693
22	$138,754	$131,817	$125,226	$118,964	$113,016	$107,365	$101,997	$96,897	$92,052	$87,450	$83,077	$78,923
23	$124,879	$118,635	$112,703	$107,068	$101,715	$96,629	$91,797	$87,208	$82,847	$78,705	$74,770	$71,031
24	$112,391	$106,771	$101,433	$96,361	$91,543	$86,966	$82,618	$78,487	$74,562	$70,834	$67,293	$63,928
25	$101,152	$96,094	$91,290	$86,725	$82,389	$78,269	$74,356	$70,638	$67,106	$63,751	$60,563	$57,535

Example – Cancellation Ceilings Table (ePB Schedule 5)

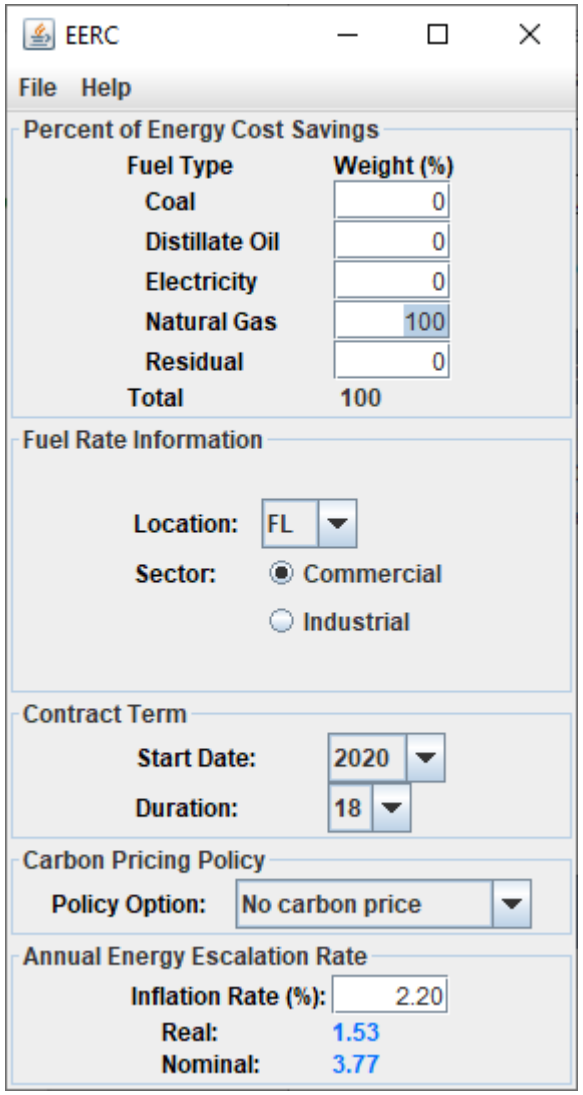
Escalation Rates

- **Agency typically accepts energy price risk**
- **Down sides to both over- and under-estimating**
  - Over-estimates: payments > savings
  - Under-estimates: reduce scope, longer term
    - Reduced scope leaves site more exposed to increases in energy rates
    - Longer term leads to greater interest costs
- **Solution = Energy Escalation Rate Calculator (EERC)**
  - Calculates average escalations given location and term of contract
  - Standard for setting escalation rates for federal performance contracts



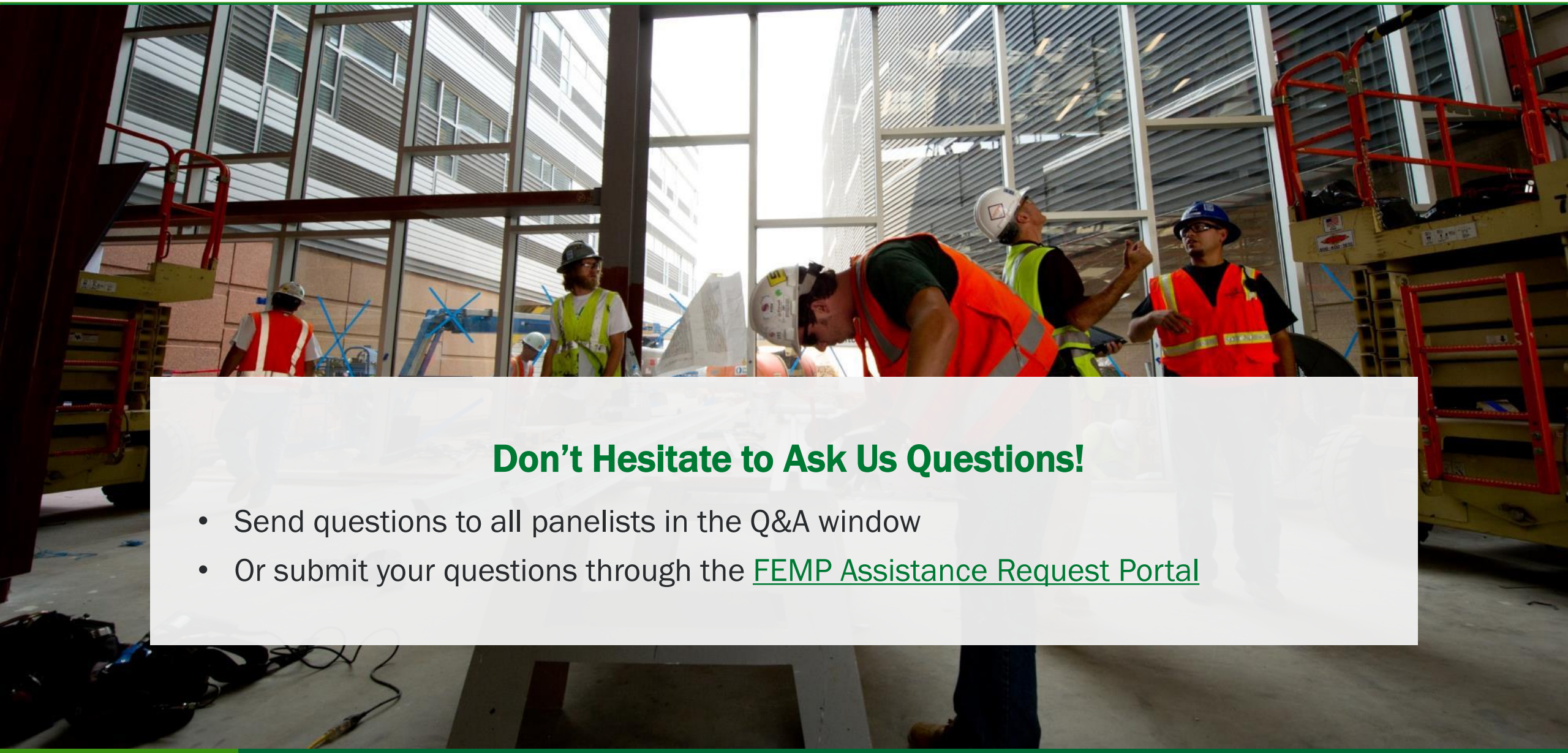
"Conservative" escalation rate is an accurate one - NOT an artificially low one

Evaluating Utilities and Escalation Rates



- **All energy types accounted for**
  - Electricity, natural gas, water, sewer, propane, etc.
- **Baseline utility rates properly documented**
- **Escalation rates appropriate and documented**

Q&A



Don’t Hesitate to Ask Us Questions!

- Send questions to all panelists in the Q&A window
- Or submit your questions through the FEMP Assistance Request Portal

Enjoy the Break!

(We'll resume shortly)

When poll is active, respond at **PollEv.com/lcrow118**

When should a contracting officer begin participating in UESC discussions with site staff?

a. When the UESC task order is...
b. After the site selects a ut...
c. During the acquisition plan...
d. After the utility completes...

When poll is active, respond at **PollEv.com/lcrow118**

What is the name of the secure, web-based system developed for the Department of Energy to easily summarize project data and develop task order financial schedules?

a. eProposal Builder

b. eProject Builder

c. eProject Book

d. Federal Compliance Tracking System

When poll is active, respond at **PollEv.com/lcrow118**

eProject Builder TO Schedules are the exact same for UESC and ESPC and can be used interchangeably?

True

False

Price Evaluation Responsibilities

Pricing Evaluation

Contracting Officer's Responsibilities:

- Responsible for determination of fair and reasonable pricing
- Establish pre-negotiation objectives before negotiation of any pricing action
- Lead negotiations (if required)
- Documents the contract file with principal elements of negotiated agreement

Fair and Reasonable Pricing

- Applies to all price components (ECMs, performance-period services, and financing costs)
- Adequate price competition necessary for CO to exempt a firm-fixed-price contract from requirement of certified cost and pricing data (FAR 15.403-1)
- CO may request advice and assistance of other experts to ensure appropriate analysis is performed
- Obtain necessary documentation from utility to make reasonableness determination

Where lack of legislation or other authority, FAR requirements apply.

For pricing of UESCs : FAR 15.404 (Proposal Analysis)

Supporting Information from Utility on Pricing

- **Agency specifies required level of detail**
  - Project development costs
  - Implementation-period pricing
  - Performance-period expenses
- **Utility Price Proposal**
  - TO financial schedules
  - Subcontract pricing is valuable information
    - Agencies should require information on competition of subcontracts (3 bids recommended)
    - FAR 15.404-3 requires utility analysis of subcontract prices included in proposal
  - Price build up for cost elements (if other price analysis techniques are insufficient)

Review Strategy

- **Start with TO financial schedules**
  - Pricing summarized in financial schedules
- **Look for reasonableness, consistency, and back-up documentation on:**
  - ECM implementation price
  - Performance-period expenses
  - Financing, financing procurement price
- **Verify total price is complete and reflects appropriate implementation costs**
- **Make sure performance-period services are consistent with Performance Assurance Plan requirements**

Proposal/TO Pricing Review

- **Costs must be transparent, and should be traceable**
- **Follow agency policies and procedures for price reasonableness assessment**
  - Review prime contractor analysis of subcontract pricing (FAR 15.404-3)
- **Document results of analysis**
- **Open communication is critical**
  - Within review team and with utility

Price Analysis Methods – FAR 15.404-1(b)(2)

Comparison of proposed prices received in response to the utility's solicitation

- First preference in FAR, but UESC is with one prime contractor (utility)
- Competition of subcontractors for best value
- Review prime contractor analysis of subcontract pricing (FAR 15.404-3)

Comparison of proposed prices to historical prices paid

- Must ensure apples to apples comparison
- Prior price must be valid basis for comparison
- May require adjustments to account for differences
- Escalate specific prices to current dollars

Price Analysis Methods (cont'd)

Parametric estimating application of rough yardsticks

- Ex: $/MBtu (boilers), $/fixture (lighting), $/ton (chillers), etc.
- Extension of comparing past prices/cost estimating relationships
- Site or agency data from previous projects preferred
- Prices not always transferable due to equipment size, location, site specific requirements

Comparison with competitive published price lists, market price similar indexes

- May require significant adjustment for direct comparison

Comparison of proposed price with Independent Government Cost Estimate (IGCE)

- RSMeans or similar method for specific ECMs
- Requires estimator to have complete proposal, understand scope

Price Analysis Methods (cont'd)

Comparison of proposed prices with prices obtained through market research from same or similar items

- May not provide valid comparison due to site specific variances
- May be helpful in combination with parametric estimating tools (i.e., $/kW, $/tons cooling, etc.)

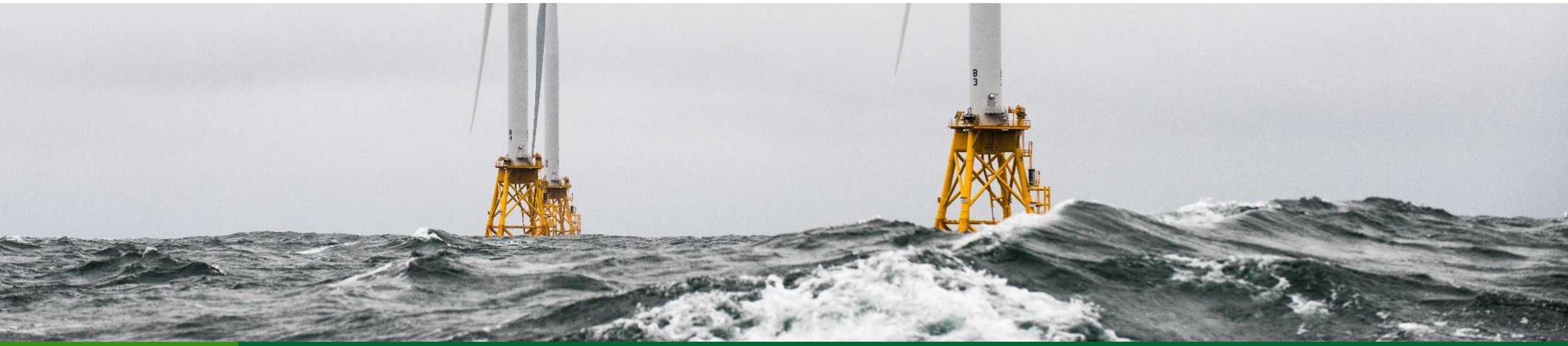
Analysis of data other than certified cost or pricing data provided by the offeror

- Often requires analysis of individual cost elements
- Focus on large item costs, obtain pricing detail on remaining items sufficient to determine fair and reasonableness
- May require technical support for individual elements

Cost Analysis and Technical Analysis

- **Review separate cost elements and detailed backup provided by utility**
  - Required to analyze ECMs if no other data to provide comparison exists or applicable
- **Require minimum information from utility needed to determine price reasonableness**
- **CO may seek opinion of individuals with specialized knowledge of equipment or services being procured**
  - Labor mix and effort
  - Equipment selection and sizing
  - Construction period timeline
  - Performance period requirements

Determining Price Reasonableness



Price Competition – Start with ECM Pricing Summary

ECM - Technology Category*	ECM No.	ECM Description – Title*	ECM Size	ECM Coverage (%)	Location	(a)	(b)	(c)	(d)
						Implementation Cost (Direct)*	Mark-up (Overhead & Profit)	Applied Incentives	Implementation Price PDP + [a+b] - c
Project Development Price (PDP)-Technical Energy Audit and Project Proposal									$600,000
Building Automation Systems/Energy Management Control Systems (EMCS)	14.3	Building EMIS	499 SF 3000 points	60.00%	1, 3, 101,150	$2,500,000	**$500,000**	$150,000	**$2,850,000**
Chiller Plant Improvements	12.2	Three 900-ton centrifs	Plants Y and Z	40.00%	101,150, 175, 200	$2,600,000	**$520,000**	$260,000	**$2,860,000**
Appliance/Plug load reductions	A-8	Misers, computer equipment	3200 ponts	50.00%	1, 3, 101,150,	$1,000,000	**$200,000**		**$1,200,000**
Electric Motors and Drives	19.1	VFDs	160 drives	100.00%	101, 150	$1,200,000	**$240,000**	$150,000	**$1,290,000**
Distributed Generation	DG-23	CHP	700kw	100.00%	1, 3, 101,150,	$8,000,000	**$1,600,000**		**$9,600,000**
Refrigeration	R-9	Upgrade and replace refirigeration units	45 refrig units	100.00%	1, 3, 101,150,	$1,500,000	**$300,000**		**$1,800,000**
TOTALS:						**$16,800,000**	**$3,360,000**	**$560,000**	**$20,200,000**

Review Subcontractor Competition

Utility should provide details of subcontractor bids and selection rationale

- List of companies requested to bid
- Summary chart (example below)
- Detailed bid letters from each
- Rationale for best value to government if not selecting low bid

Example Subcontractor Bid Summary

Subcontractor Name	Business Type	Equipment	Engineering / Consultants	Installation	Removal / Disposal	P&P Bond	TOTAL
Chiller Sub 1	Large	$1,687,000	-	$395,000	$95,000	$32,655	**$2,209,655**
Chiller Sub 2	Small/Disadv	$1,480,000	$108,000	$297,000	$88,000	$29,595	**$2,002,595**
Chiller Sub 3	Small	$1,140,000	$75,000	$370,000	$55,000	$24,600	**$1,664,600**
Chiller Sub 4	Small WO	$1,560,000	$94,000	$324,000	$83,000	$30,915	**$2,091,915**

Costs Must be Traceable

Transparency and traceability help keep the review process moving!

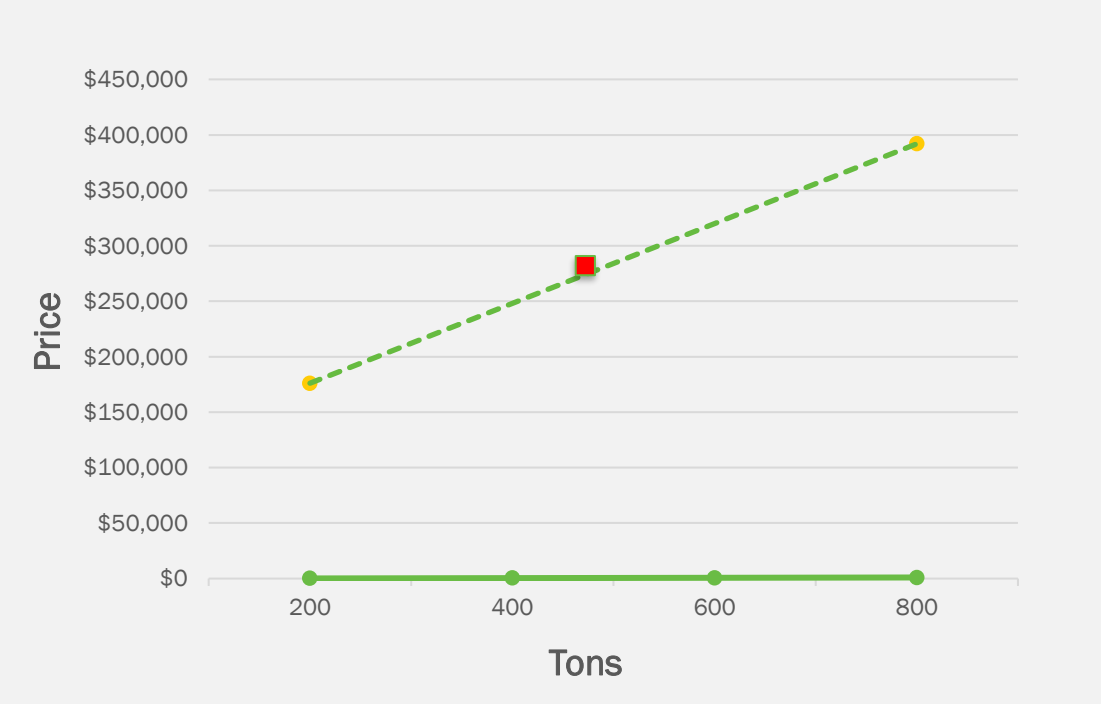
For each ECM:

- **Selected subcontractor bid + other utility costs for installation must add up to ECM's proposed implementation cost**
  - Supporting details should be provided for costs to complete ECM design and installation, post-installation performance verification, commissioning, and training
  - Only require information needed to make price reasonableness determination
- **Any other utility costs included in markup should be transparent**

Example 1: Parametric Estimating – Chillers

FAR 15.404-1: "Application of rough yardsticks…"

- Agency's previous chiller project costs:
  - $176,000 to replace 200-ton chiller
  - $392,000 to replace 800-ton chiller
- Based on this info, what's a reasonable price for 500-ton chiller?

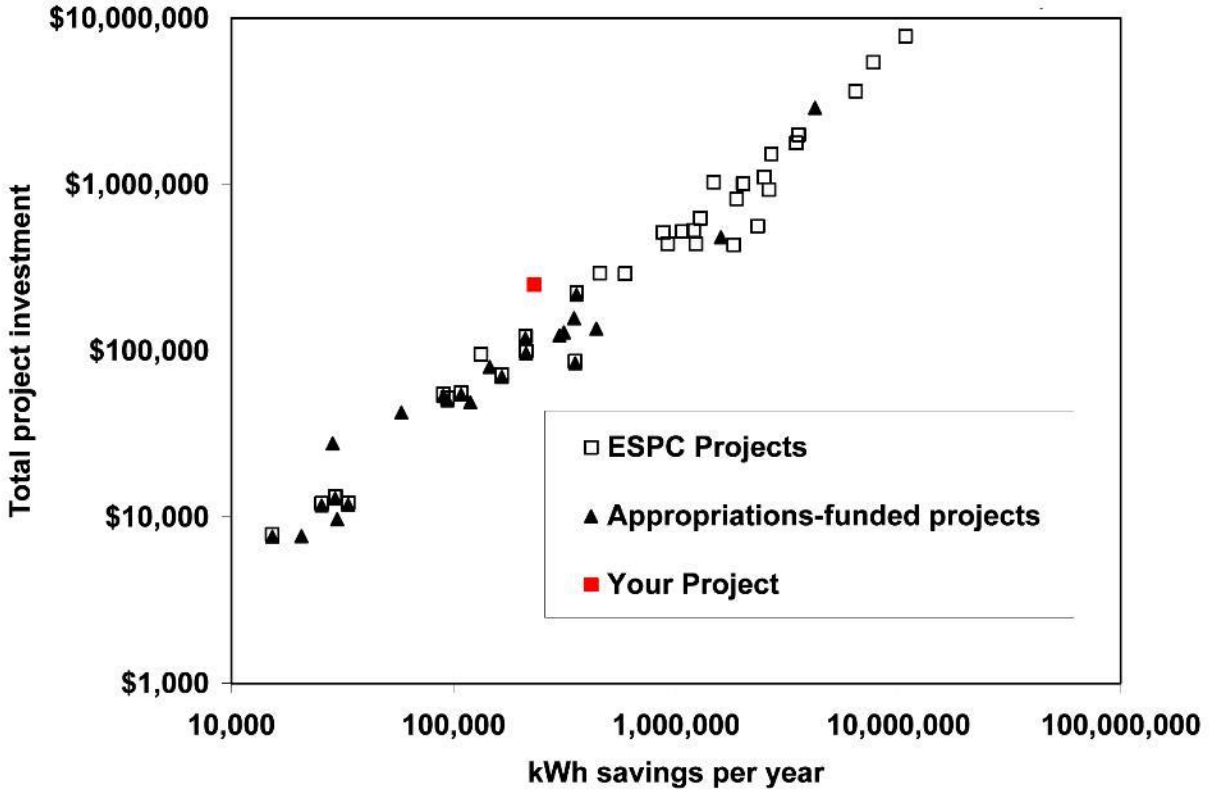


Roughly $280,000

Comparison with Similar Projects

Price Comparison – LED Lighting

(Similar Scope, Size, Location, and Date)



- **Data from previous agency projects**
  - May include appropriations, UESC, ESPC, other funding sources
  - Use same region and similar facilities
  - Ensure same technology used for comparison
- **FEMP may be able to support analysis**

Supporting Information - Construction

Implementation Period Pricing - Summary of design and construction pricing allocated per ECM

- Equipment and material costs (major components broken out separately)
- Final design
- Project management
- Installation labor
- Startup and commissioning
- O&M training (labor)
- Post installation performance verification
- Overhead and profit

Supporting Information – Performance Period

Performance Period Pricing - Summary of performance period expenses

- Project management, contract administration (labor)
- Operations (if required)
- Maintenance (labor/materials)
- Repair and replacement (labor/materials)
- Performance Assurance (performance verification, recommissioning, etc.)
- Training (labor)
- Overhead and profit

Performance Period Pricing (UESC)

Example – Performance Period Cash Flow (ePB Schedule 3)

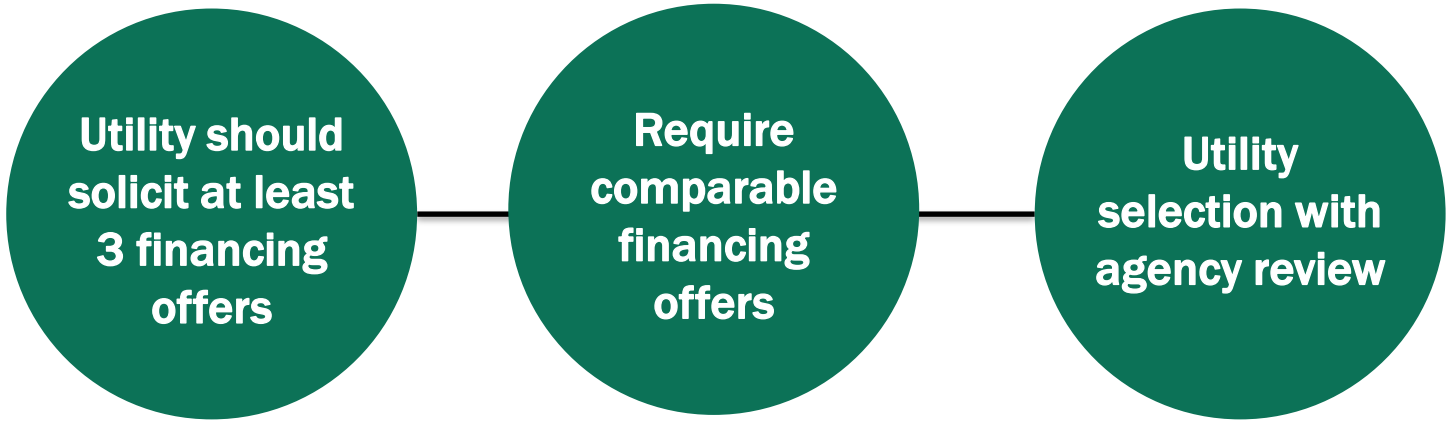
	Term (year)	Implementation Period (Year 0)	1	2	3	4	5	6	7
Debt Service/Performance Period Payments	Principal Repayment		$423,055	$1,505,599	$556,404	$609,932	$666,305	$725,653	$788,109
	Performance Period Incentives and Other Payments		$50,000	$1,000,000					
	Dollar savings retained by customer		$50,000	$0	$0	$0	$0	$0	$0
	Interest ($)		$686,803	$635,093	$615,983	$595,034	$572,150	$547,227	$520,159
	Total Debt Service (a)		$1,109,858	$2,140,692	$1,172,387	$1,204,966	$1,238,455	$1,272,880	$1,308,268
Performance Period Expenses	Management/Administration		$25,000	$25,500	$26,010	$26,530	$27,061	$27,602	$28,154
	Operation		$30,000	$30,600	$31,212	$31,836	$32,473	$33,122	$33,784
	Maintenance		$5,000	$5,100	$5,202	$5,306	$5,412	$5,520	$5,630
	Repair and Replacement			$0	$0	$0	$0	$0	$0
	Measurement and Verification		$32,000	$32,640	$33,293	$33,959	$34,638	$35,331	$36,038
	Other PP Expense 1: Other		$300	$300	$300	$300	$300	$300	$300
	Other PP Expense 2: Other		$500	$500	$500	$500	$500	$500	$500
	SUBTOTAL Before Application of Mark-up		$92,800	$94,640	$96,517	$98,431	$100,384	$102,375	$104,406
	Mark-up (Overhead & Profit %)		20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
	Mark-up (Overhead & Profit-$)		$18,560.00	$18,928.00	$19,303.00	$19,686.00	$20,077.00	$20,475.00	$20,881.00
	TOTAL Performance Period Price (b)		$111,360	$113,568	$115,820	$118,117	$120,461	$122,850	$125,287
Annual Cash Flow (Performance Period)	*TOTAL - ANNUAL PAYMENTS (a)+(b)*	**$200,000**	**$1,221,218**	**$2,254,260**	**$1,288,207**	**$1,323,083**	**$1,358,916**	**$1,395,730**	**$1,433,555**

Review of Performance Period Pricing

- Start with year 1 proposed price
- Review supporting information, alignment with year 1 activities
- Ensure O&M, R&R costs consistent with level of effort described in performance assurance plan
- Ensure performance assurance costs are consistent with plan
  - Parameters agreed to in final proposal are monitored throughout performance period
  - Price reflects level of effort in performance assurance plan
- Ensure major repairs accounted for throughout performance period (if required by TO)
- Performance period services may differ by ECM
- Compare to other UESCs or ESPCs with similar ECMs

Financing Review

Financing Selection Review



Investor Deal Summary (IDS)

Standard Financing Offer (SFO)

- **Review Investor Deal Summary (IDS)* to ensure accuracy**
- **Review Standard Financing Offers (SFO)* and utility financier selection**
  - Utility selects financier based on best value
  - Agency CO reviews

**Use of IDS and SFO is recommended for UESCs but not required*

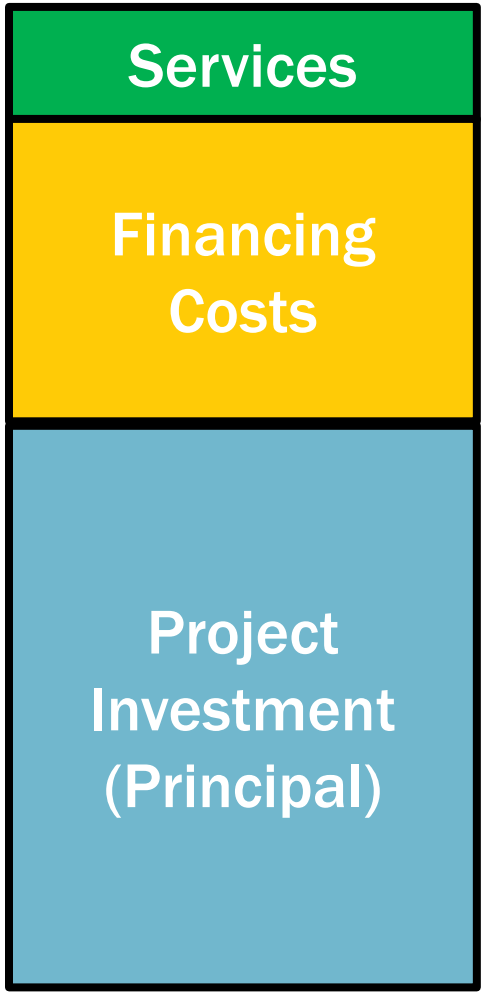
Financing Selection Review (continued)

- **Ensure all finance costs have no utility markup added**
- **Understand details of financing to ensure best value**
- **Get help as needed**
  - Ask questions of the utility
  - Ask your Project Facilitator or contact a Federal Project Executive for assistance

	Financing Terms	
Costs & Financials	Applicable Financial Index	Like-term Treasury bond
	Performance Period (years)	19
	Index Rate*	2.00%
	Added Premium (adjusted for tax incentives)*	1.50%
	Project Interest Rate (sum of two above inputs)	3.50%
	Financing Issue Date (mm/dd/yyyy)	5/28/2021
	Project Award Date (mm/dd/yyyy)*	5/28/2021
	Effective Through (mm/dd/yyyy)	
	Primary Type of Financing (choose from list)	Loan (Utility)
	Secondary Type of Financing (choose from list)	Appropriation/Cash
	Payment Timing*	Beginning

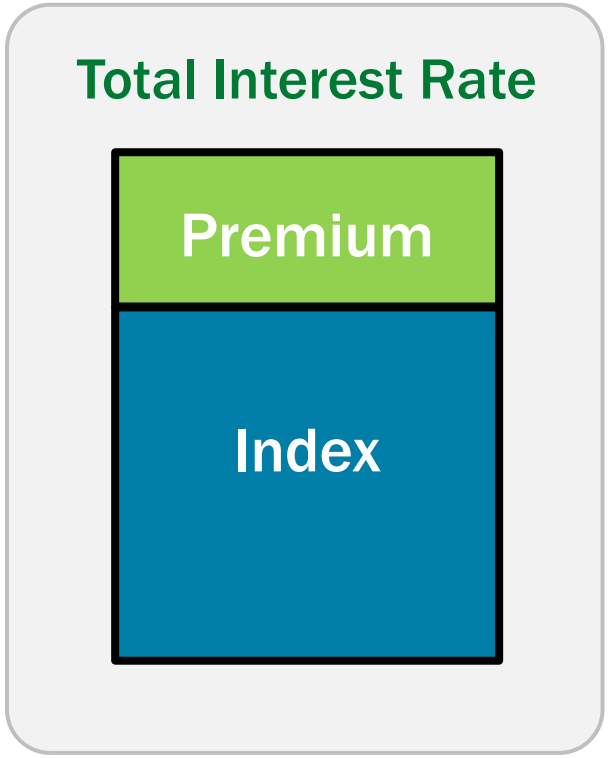
What is Financed?

- **Project development costs (IGA)**
  - Unless paid for separately
- **ECM costs**
  - Equipment, installation, and commissioning, incl. mark-ups
- **Financing procurement price (FPP)**
  - Pass-through fee charged by financier
  - Includes construction-period interest (majority of FPP)
  - Accounts for effort to arrange financing
- **Minus any up-front payments (usually at project acceptance)**
  - Construction period savings, incentives (e.g., from utility), agency capital contribution



Components of the Interest Rate

- **Index interest rate — largest component**
  - Represents prevailing cost of money in long-term borrowing market
  - Based on U.S. Treasury rates
  - Changes day to day
- **Premium — basis points added to index rate (1% = 100 basis points)**
  - Financier's costs (legal fees, administration, etc.)
  - Financier's perception of risk (main factor)
- **Finance costs are pass-through – no markup or fees by any other name!**



Web sources for rates:

- www.bloomberg.com
- www.federalreserve.gov/releases/h15/current

FEMP Financing Resources

- **Investor Deal Summary:** format for summarizing project and soliciting financing offers
- **Standard Financing Offer:** format for financing offer
- **Guidance Regarding Refinancing, Restructuring, or Modifying Loan Agreements Entered into by an ESCO Under a Federal ESPC:** guidance on refinancing performance contracts

On-Demand Training

Financing For UESCs: Ensuring The Best Value For The Government

Putting it All Together

Putting It All Together

- **Price Negotiation Memorandum (FAR 15.4 06-3)**
  - Memorializes results of price analysis
  - Establishes government's initial and final negotiation positions
  - Needed to prepare for negotiations
- **Elements of the Memorandum**
  - Purpose of the negotiation
  - Name, position, and organization of all participants
  - Statement with exception to requirement for certified cost/price data

Putting It All Together (cont'd)

- **Summary of Contractor's proposal**
  - Table with all major cost elements
  - Details and analysis of each element including price breakout for each ECM
  - Government's negotiation objective/position
  - Where based on cost analysis, summary shall address each major cost element
  - When based on price analysis, summary to include source and type of data used to support determination
- **Significant facts/considerations controlling establishment of pre-negotiation objectives and negotiated agreement**
- **Basis for profit or fee pre/post negotiation (FAR 15.404)**
- **Documentation of fair and reasonable pricing**

Price Review Strategy Summary

- **Step 1** – Assess quality and completeness of price data, starting with financial schedules
- **Step 2** – Use benchmarking or parametric analysis where possible
- **Step 3** – Analyze cost elements of items if competition, benchmarking, other analysis techniques unavailable
- **Step 4** – Document analysis results, develop pre-negotiation objectives
- **Step 5** – Work with utility to get to reasonableness determination for areas in question
- **Step 6** – Document results of negotiation; gain approvals to make award

Negotiations

- **Agency contracting and technical teams work together**
  - CO leads negotiation, awards TO
  - Technical team assists with price/cost recommendations as requested
    - May be helpful for technical team to provide a government estimate for project cost (may be agency-specific requirement)
    - Or updates original gov't estimate as required by agency recommendations to CO
- **Go into negotiations with intent to come to mutual agreement**
- **Update timeline to award realistically**

Key Takeaways/Best Practices

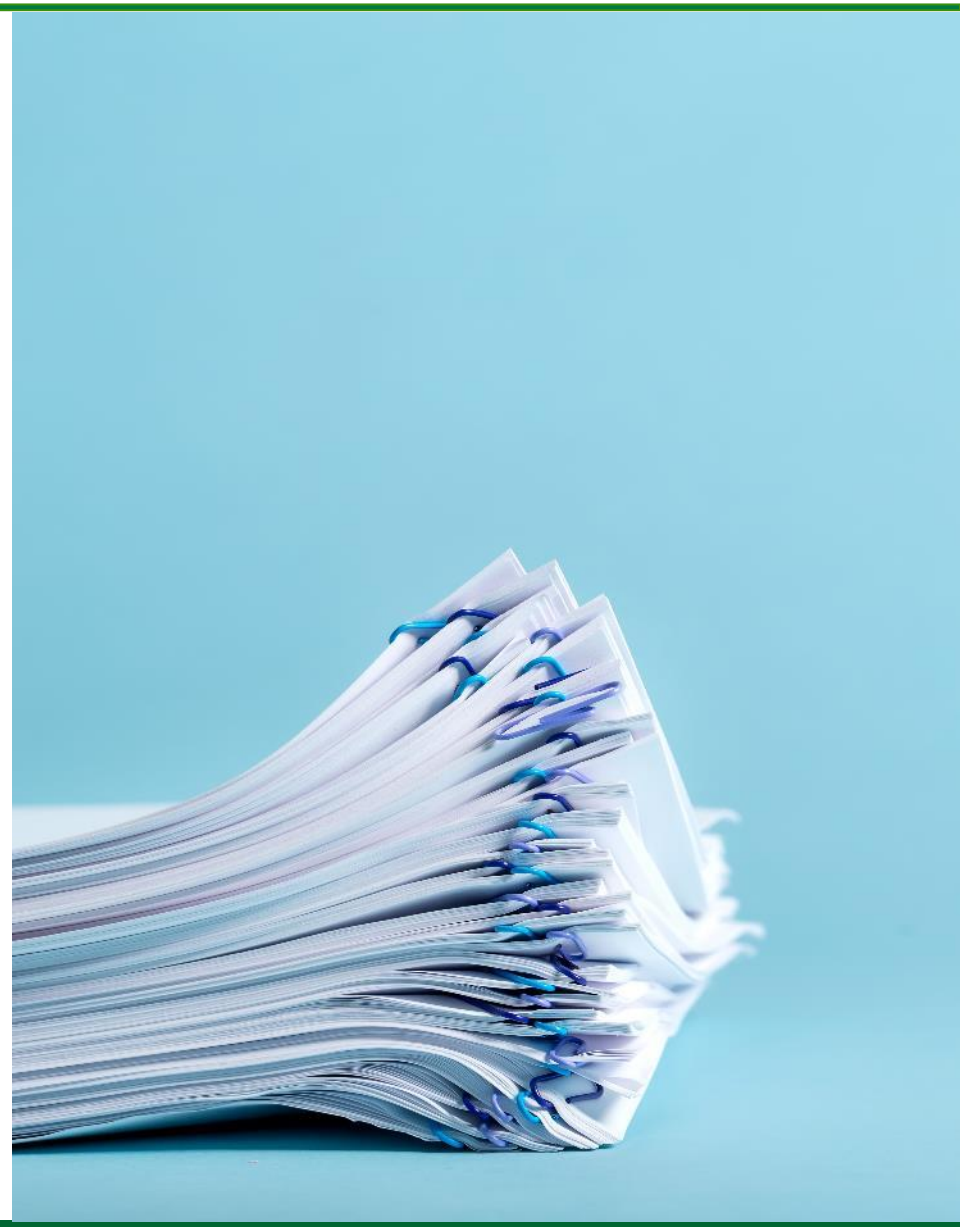
- **CO responsible for determining price reasonableness**
  - Follow FAR and agency policies / procedures
- **Start with TO financial schedules**
- **Costs must be traceable across task order schedules, and supported by sufficient pricing detail**
- **Be familiar with full scope of work**
- **Communicate with utility as needed**
- **Get technical and other help as needed**
  - Agency COR, Project Facilitator, FEMP
- **Document price analysis at every step and retain all documentation for contract file!**

Contract Management

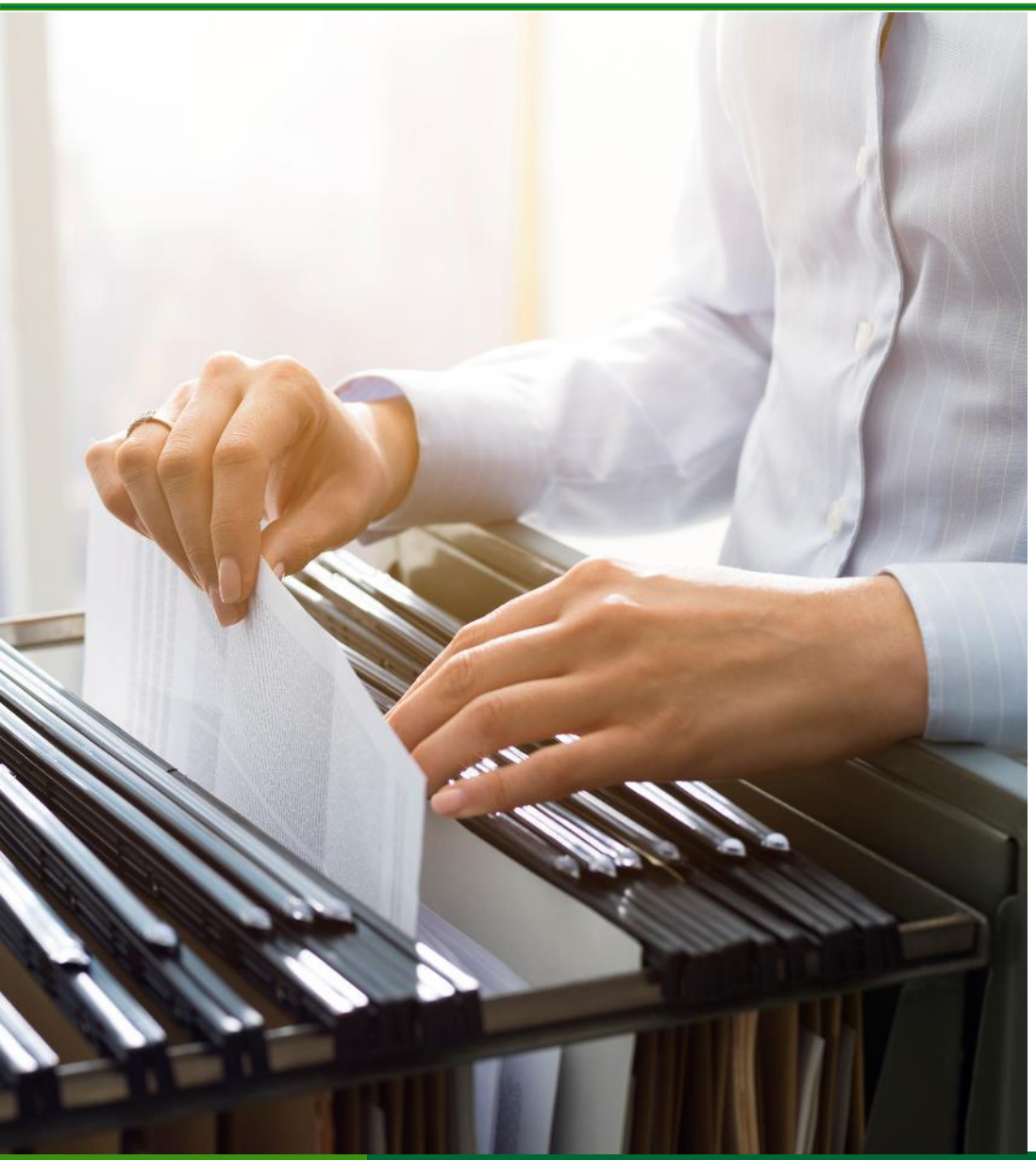
Ongoing Contract Management

Recommended information to manage contract

- **Summary of project details**
  - Period of performance, current contract value, contract type
  - Background on the scope of work
  - Awarded TO, including TO Schedules
  - Contract deliverables
  - Method for monitoring performance and savings
- **Required performance assurance documentation**
- **Personnel**
  - Contract management team members; their authorities, responsibilities, and limitations
  - Key utility personnel and plan for turnover
- **Communication protocols**
- **Invoicing procedures**



Ongoing Contract Management (continued)



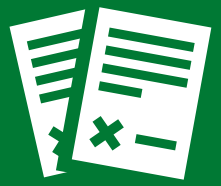
Designate primary contact responsible for:

- Leading contract management through end of term
- Maintaining continuity of documentation and awareness of the UESC through end of term

Agency contract management plan is a FEMP best practice

- Prepare and finalize plan at TO award
- Update and keep it current
- Follow the plan!

Ensuring Your UESC is Audit-Ready



An audit-ready project is one that maintains complete and up-to-date contract files:

- Includes all relevant project documents from acquisition planning through post-award performance
- Memorializes key decisions and administrative actions
- Records review and acceptance of post-installation and performance period reports

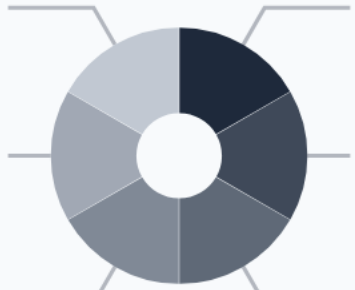
Why is it important?

- **Ensures contract terms and conditions are met and in compliance with agency goals & regulations**
- **Prepares agency in event of an audit**
  - UESC auditing authority = Government Accountability Office (GAO) and agency inspectors general
  - Congress can review any federally funded project
- **Assists with project continuity and helps mitigate effects of staff turnover**

When poll is active, respond at **PollEv.com/lcrow118**

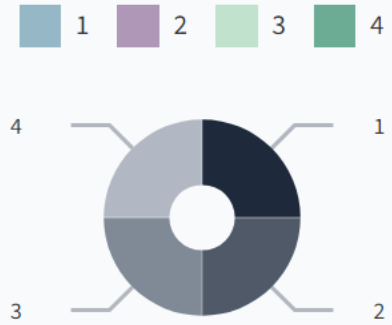
Cost elements of a UESC price proposal include all of the following EXCEPT:

Financing
Performance-Period Services
Project Development
Acquisition Planning
Costs of Good & Services
Mark-Up (Overhead & Profit)



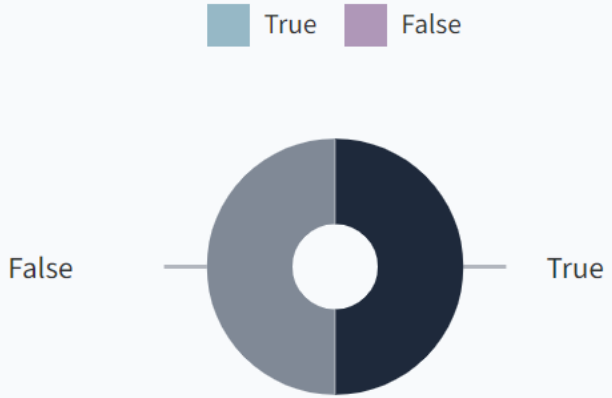
When poll is active, respond at **PollEv.com/lcrow118**

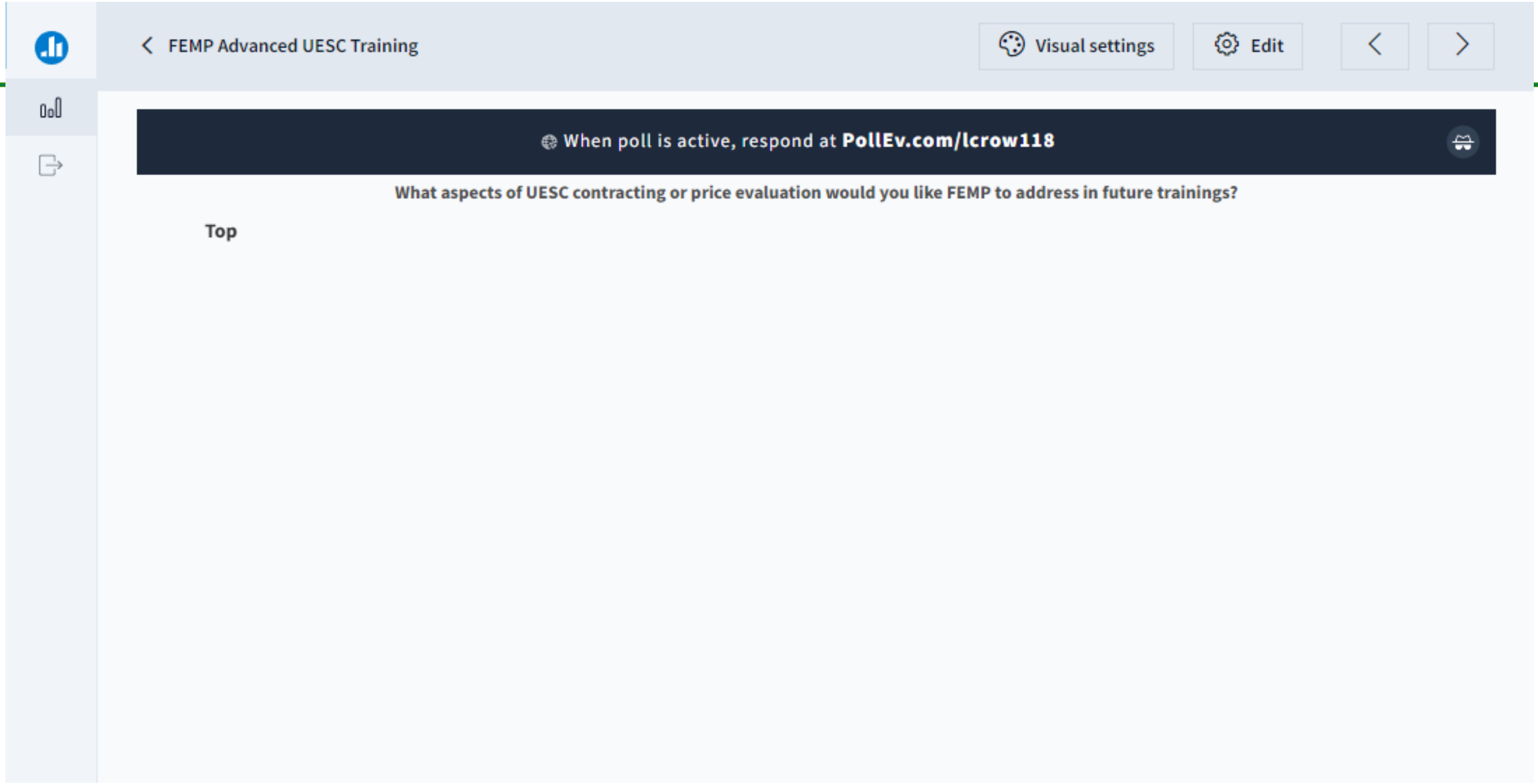
When utilizing subcontractors for ECM implementation, it's recommended that utilities solicit at least _____ bids and include cost details for comparison in the price proposal.



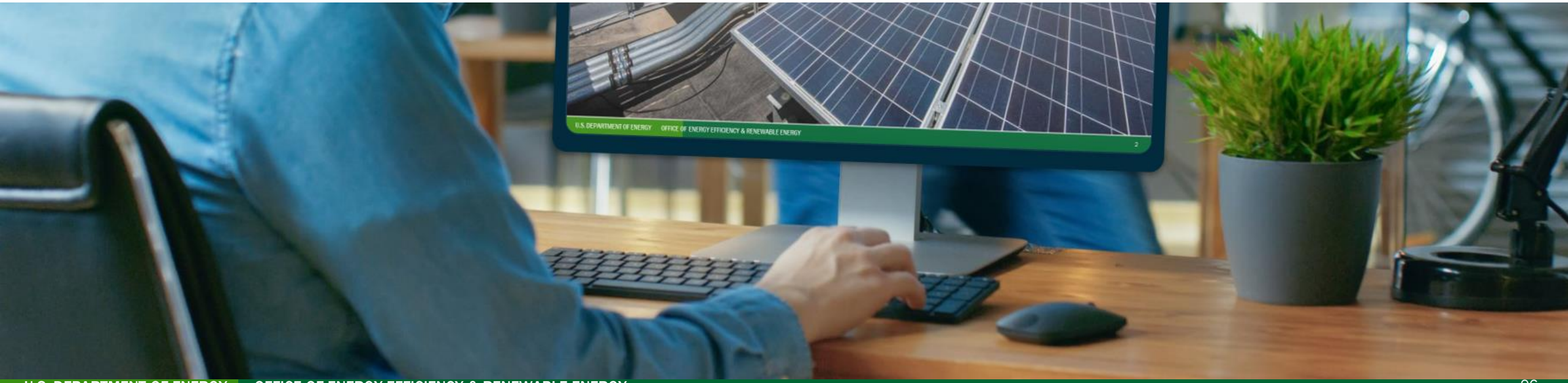
When poll is active, respond at **PollEv.com/lcrow118**

It is acceptable for the utility to add mark-ups to financing costs for UESCs.



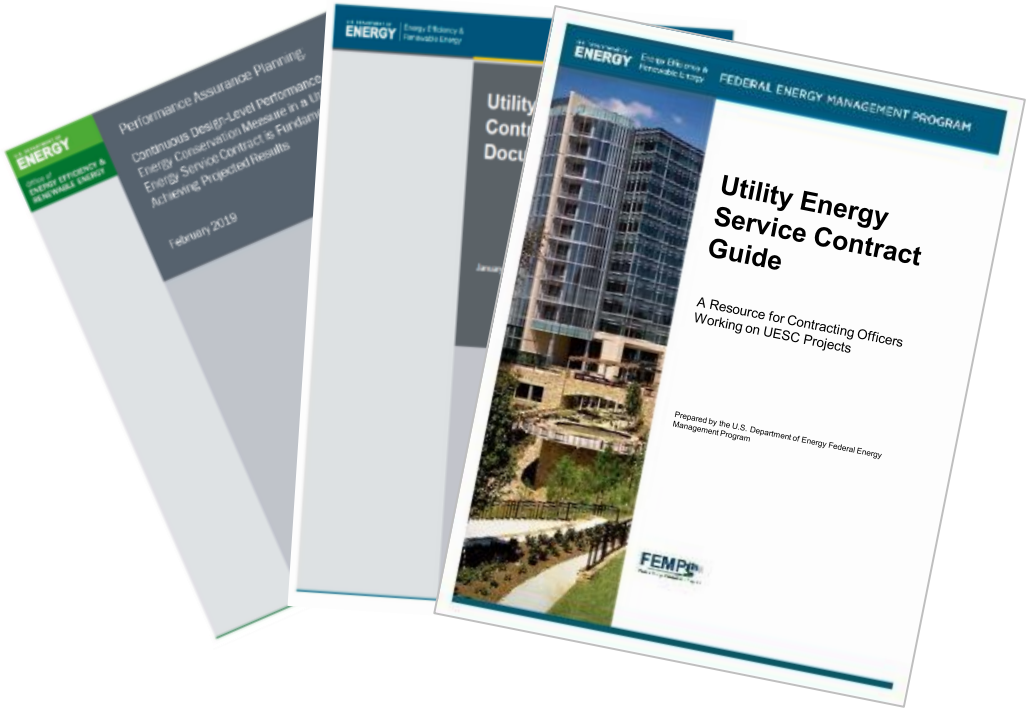

FEMP Advanced UESC Training
Visual settings
Edit
When poll is active, respond at PollEv.com/lcrow118
What aspects of UESC contracting or price evaluation would you like FEMP to address in future trainings?
Top

FEMP Resources Review and Project Support



UESC Resources

- **UESC Website** – access everything from resources to case studies and webtools
- **UESC Project Development Resources** – downloadable guides, templates, and tools listed by topic and project phase
- **On-Demand Training** – learn at your own pace (CEUs available)
- **Step-by-Step Implementation Process**



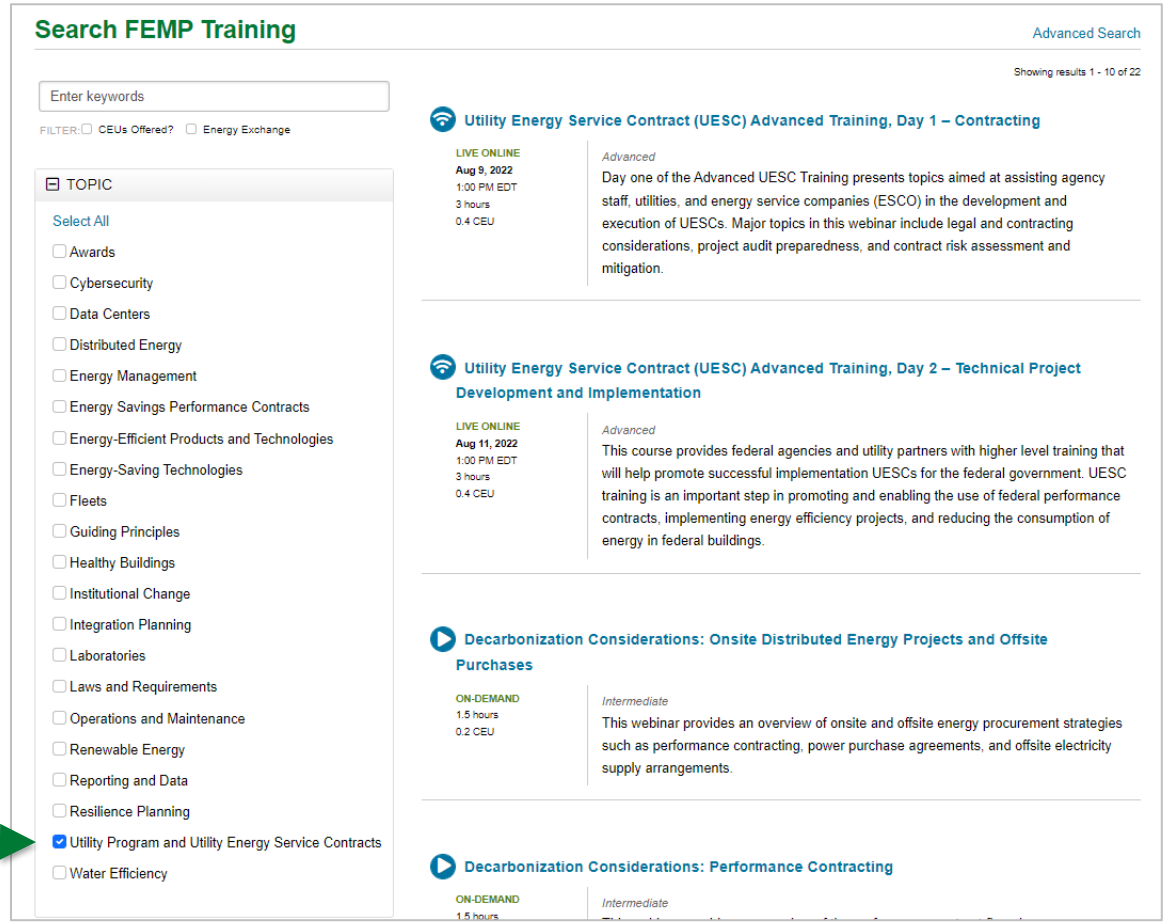
UESC Webinars and On-Demand Training

Live and on-demand webinars can be accessed through the FEMP Training Catalog

- Courses are hosted by the Whole Building Design Guide website
- Continuing Education Units (CEUs) available
- Topics include:
  - 7-part UESC Basics On-Demand Webinar Series
  - Advanced topics such as performance assurance, financing, utility rate analysis, decarbonization considerations, and more!

Filter courses by Utility Program and UESCs

Click Here to View the FEMP Training Catalog



eProject Builder (ePB)

Secure web-based energy project tracking/reporting

- **Free tool maintained by LBNL for U.S. DOE**
- **ePB enables contractors and their customers to securely:**
  - Preserve and track project information in perpetuity
  - Develop project scenarios using standardized calculations
  - Output financial schedules, M&V reports, analysis on portfolio of projects
  - Compare proposed projects against historical ones
- **Utility (or ESCO partner) may be designated "project builder" to populate project data and submit documentation for approval**
- **FEMP recommends use of ePB but it's important to check agency policy (ex. – DOD policy may not allow it)**

eProjectBuilder

eprojectbuilder.lbl.gov

Need Help?

epb-support@lbl.gov

On-Demand Training

ePB for UESCs: Enhancing Project Comprehension and Transparency with eProject Builder

FEMP Support and Technical Assistance

FEMP provides UESC training and project support at no cost to federal agencies:

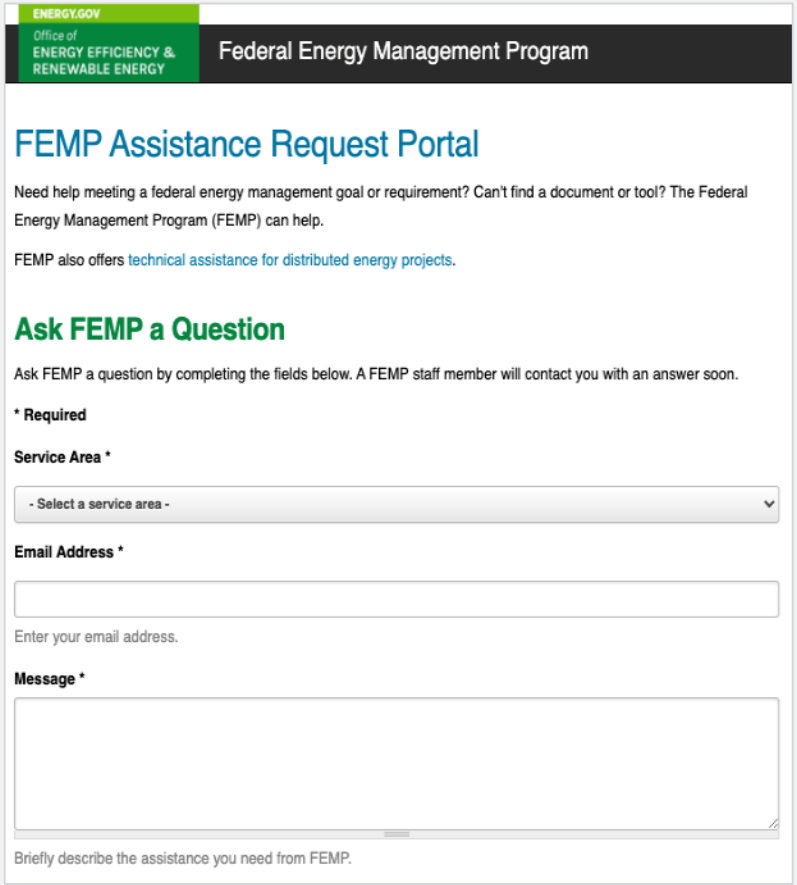
- Project guidance and discussions with Federal Project Executives (FPEs)
- Tailored training for federal agencies and utilities
- Technical assistance provided by DOE National Labs
- Federal Utility Partnership Working Group
- Strategic Partnership Meetings with utilities

Learn More

Download Scope of Support Document

FEMP Assistance Request Portal

Submit questions and support requests



Taking the First Step

Talk to the FEMP Federal Project Executive (FPE) in your region for assistance.

energy.gov/eere/femp/energy-savings-performance-contract-federal-project-executives-0

Northeast Region

Tom Hattery
Northeast Region
202-256-5986
thomas.hattery@ee.doe.gov

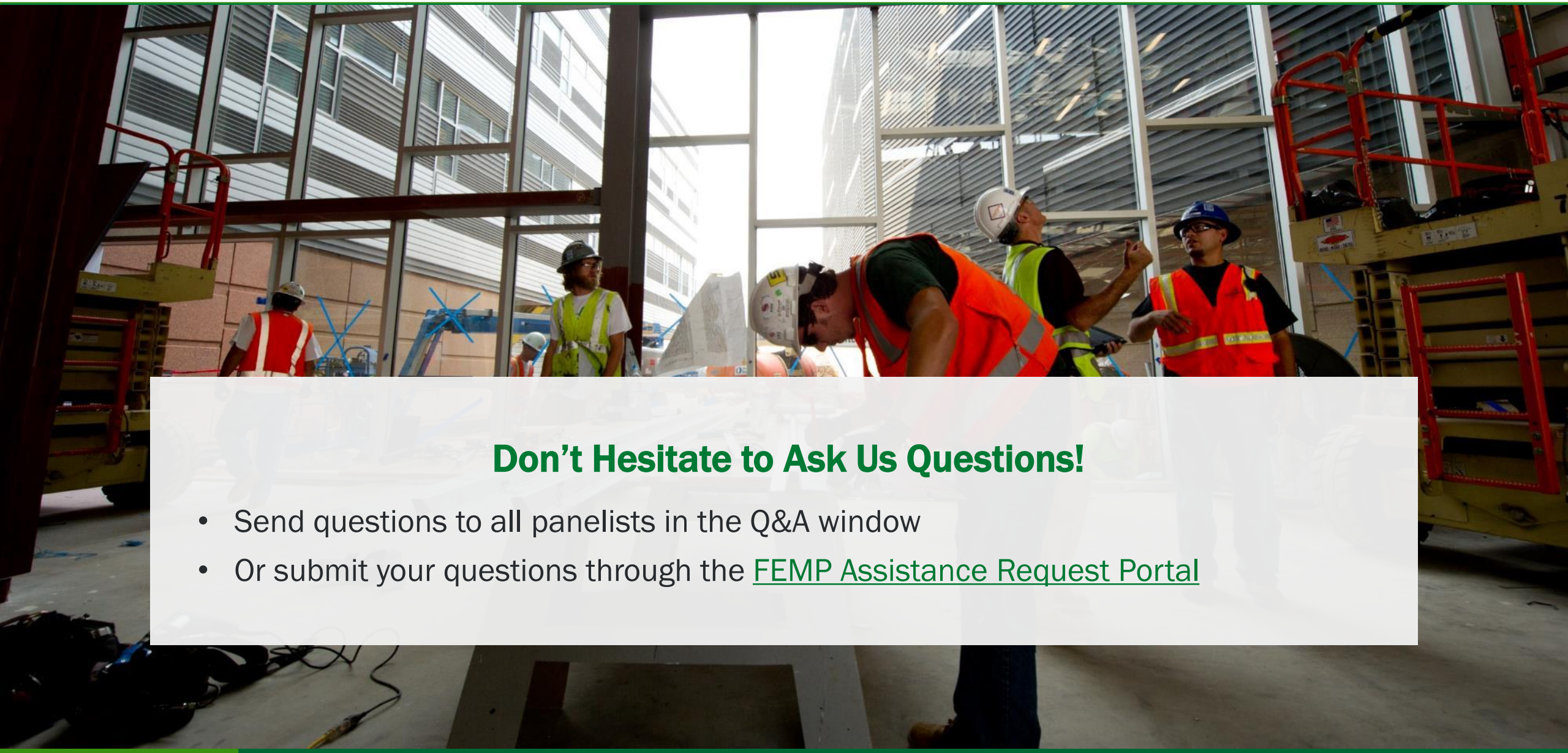
Southeast Region

Doug Culbreth
Southeast Region
919-870-0051
culbrethcd@ornl.gov

Western Region

Scott Wolf
Western Region
360-866-9163
wolfsc@ornl.gov

Q&A



Don’t Hesitate to Ask Us Questions!

- Send questions to all panelists in the Q&A window
- Or submit your questions through the FEMP Assistance Request Portal

Looking Ahead to Day 2

Don't forget to register!

www.wbdg.org/continuing-education/femp-courses/femplw08112022

Agenda: Technical Project Development and Implementation

- **Decarbonization considerations**
- **Project risks & mitigation strategies**
  - Project development
  - Implementation
  - Performance period
- **Performance assurance considerations**
  - Requirements
  - Recommendations

IACET-Certified Continuing Education Units (CEU)

To Receive IACET-Certified CEUs:

- **Attend the training in full–no exceptions**
- **Within six weeks of the training (before September 20!):**
  - Complete the assessment (a minimum score of 80% is required)
  - Complete an evaluation of the training

Access the UESC Training Assessment and Evaluation

Day 1 – https://www.wbdg.org/continuing-education/femp-courses/femplw08092022

Day 2 - https://www.wbdg.org/continuing-education/femp-courses/femplw08112022

For logistical questions related to the webinar or evaluation, email Elena Meehan at elena.meehan@ee.doe.gov.

Thank You!

FEMP
Federal Energy Management Program

NREL
NATIONAL RENEWABLE ENERGY LABORATORY