

222 Williams Avenue South, Suite 100
Renton, WA 98057
P: 206 522 4270
F: 425 687 3171
ameresco.com

January 18, 2024

Mrs. Sarah Thomasson
Department of Enterprise Services
1500 Jefferson Street SE
PO Box 41476
Olympia, WA 98504-1476

SUBJECT: Energy Audit Fee Proposal
City of Olympia Armory

Dear Sarah:

We are pleased to submit this proposal for the audit phase of the Olympia Armory Energy Efficiency Upgrades. This proposal includes energy audit services, engineering and environmental studies, and architectural and engineering services. The facilities which have been identified by City of Olympia are the Armory and Annex Building. Through preliminary efforts by the City of Olympia and Ameresco it has been determined that the overall renovation and upgrade of the facilities expands beyond the current funding opportunities that the City of Olympia currently has available. With this understanding Ameresco, the City of Olympia and Washington Department of Enterprise Services (DES) have discussed using a phased approach to the upgrades to the facility. The first phase of the overall project will have the overarching goal of making the Armory safe, accessible, functional, and open to the public while improving and implementing energy savings opportunities. To meet the needs of the Olympia Armory, Ameresco again in collaboration with the City of Olympia and DES is proposing to begin design concurrent to the Investment Grade Audit. The goal is to design the whole project through a design development level (~80% Design) so that the future improvements are ready to proceed with a reduced design effort as additional funding becomes available. Taking the design through to this level will provide sufficient design information to accurately budget the initial phase of construction and also provide a clear design concept for future phases. This additional design effort will also empower the project team to achieve a thorough understanding and enable us to strategically plan the development and implementation process. Ameresco is working with the City of Olympia to find additional funding opportunities, so that future ECM's can be implemented as additional funds become available.

Ameresco will provide engineering services for the subject project in accordance with the following:

Engineering Services

A. Audit Phase Services will include:

Ameresco will undertake an Investment Grade Audit (IGA) of the City of Olympia Armory Facilities. The IGA is an intensive engineering analysis of energy conservation and management measures for the facilities, net energy savings, and a cost-effectiveness determination. Ameresco will present to the Owner the Investment Grade Audit report and a written Energy Services Proposal.

IGA report will include:

- Executive summary of the audit findings
- A description of the Facility including type of use, square footage, and location



- Description of building systems and major equipment
- The standards of comfort and service appropriate for the Facility
- The Baseline Energy Consumption per fuel type for the Facility, including the data, methodology and variables used to compute the Baseline, and the Baseline calendar period which must not be less than 12 months, and must be multiples of 12 months.
- Utility rate schedules and/or Tariffs.
- Energy analysis calculations. If an energy model is performed the software used, baseline modeling assumptions, and summary of results.
- Facility benchmarking including the Energy Use Intensity (EUI) index and 12 months of utility data input into the Energy Star Portfolio Manager with a printout of the Energy Star Statement of Performance
- A list of applicable building, mechanical, energy, or other pertinent state and local codes that the facility currently doesn't meet or that may impact the project costs
- Description of energy efficiency measures recommended
- Description of energy efficiency measures considered and not recommended or not financially viable
- Measurement and verification (M&V) plan proposed for verifying energy savings consistent with the International Performance Measurement and Verification Protocol (IPMVP);
- Financial analysis of EEMs
- Summary table with measure name, installed cost, energy savings by utility, and O&M savings;
- Normative Annex C Reporting Forms

Conservation measures in the IGA will include items that save energy, water, or other resources (including various cost savings measures). The Energy Audit will provide detailed documentation of fieldwork for the audit, calculation input and output in support of the recommendations made in the Energy Services Proposal, economic and engineering assumptions, sketches, floor plans, and any other information developed during the Audit. Below is the list of facilities and the preliminary list of energy conservation measures identified for the energy Audit for each facility, additional ECM's may be added during the IGA process as the facilities are audited.

An audit and design project schedule outlining the tasks, deliverables, meetings, and milestones will be developed upon proposal approval.

Table 1: List of Facilities and Square Footage, Conservation Measure Lists

Building Sqft Summary:	
Facility	SqFt
Armory	42,300
Annex Building	6,783

Table 2: Preliminary list of ECM's for Armory

Armory		
Mechanical Conservation Measures		Rank
ARM-M1	HVAC Mechanical Upgrades: This measure will replace the existing HVAC system with a high efficiency HVAC system. The measure will include all equipment, piping, ductwork, insulation, pumps, controls, etc. for a complete and energy efficient system. This measure may include code required upgrades for installation and final acceptance of the proposed energy upgrades.	1-3

ARM-M2	Kitchen high efficiency appliances and operation: This measure will replace the existing kitchen appliances with new high efficiency models, upgrade kitchen equipment controls (hood, etc) and required mechanical systems for energy efficient operation.	3
Water Conservation Measures		Rank
ARM-W1	Fixture Retrofit: This measure will provide bathroom upgrades with high efficiency fixtures and install water conservation devices within the facility (aerators on sinks, flush valves on urinals and toilets, or new fixtures), and energy efficient water heating, to save water and energy. This measure may include code required upgrades for installation and final acceptance of the proposed energy upgrades.	1
ARM-W2	Irrigation System: This measure will install low irrigation landscaping, site improvements, and automated irrigation control system to optimize water usage.	3
Lighting Conservation Measures		Rank
ARM-L1	Lighting Retrofit (interior): This measure will retrofit or replace interior and exterior lighting and lighting infrastructure and controls as required. This measure may include code required upgrades for installation and final acceptance of the proposed energy upgrades.	1
General Conservation Measures		Rank
ARM-G1	Elevator: This measure will install a high efficiency Model. This measure may include code required upgrades for installation and final acceptance of the proposed energy upgrades.	2-3
ARM-G2	Building Envelope Improvements: This measure will include repairing, sealing, refinishing building envelope air gaps and eliminate loses due to infiltration. Investigate existing door opening and address the need to refurbish or replace to reduce heat loss and infiltration and improve safety. Existing window replacement with energy efficient models. This measure may include historical preservation requirements and building code required upgrades for installation and final acceptance of the proposed energy upgrades.	2-3
ARM-G3	Roof Upgrade: This measure will remove the exiting roof system membrane, insulation, underlaying ballast system, and sheathing, and replace them with a new durable and energy efficiency roof that meets or exceeds current energy code. Specifically addressing the drill hall ceiling and roof insulation to be inclusive of design for new use (and remove the ceiling in the drill hall.) This measure may include code required upgrades for installation and final acceptance of the proposed energy upgrades.	2-3
ARM-G4	Electrical Upgrade: This measure will upgrade the existing electrical service and infrastructure, designed to maximize efficiency, support future electrification, minimize electrical hazards, and ensure code compliance. i.e. EV Charging Install, energy efficient transformers, load balance, critical load support. This measure may include code required upgrades for installation and final acceptance of the proposed energy upgrades.	2-3
ARM-G5	Solar: This measure will investigate installing a solar electricity generation and/or solar thermal systems on the roof to reduce carbon emissions and lower energy costs. Investigation will include battery storage for peak load reductions, power backup, and onsite resilience.	2-3

PAYBACK RANK NOTES:

- 1) Measures that are likely to pay for themselves through energy savings and utility incentives.
- 2) Measures that may pay for themselves, or may require some capital infusion
- 3) Measures that will require significant (>50%) capital infusion

Table 3: Preliminary list of ECM's for Armory

Annex Building		
Mechanical Conservation Measures		Rank
ANX-M1	HVAC Mechanical Upgrades: This measure will replace the existing HVAC system with a high efficiency HVAC system. The measure will include all equipment, piping, ductwork, insulation, pumps, controls, etc. for a complete and energy efficient system. This measure may include code required upgrades for installation and final acceptance of the proposed energy upgrades.	1-3
Water Conservation Measures		Rank
ANX-W1	Fixture Retrofit: This measure will provide bathroom upgrades with high efficiency fixtures and install water conservation devices within the facility (aerators on sinks, flush valves on urinals and toilets, or new fixtures), and energy efficient water heating, to save water and energy. This measure may include code required upgrades for installation and final acceptance of the proposed energy upgrades.	1
Lighting Conservation Measures		Rank
ANX-L1	Lighting Retrofit (interior): This measure will retrofit or replace interior and exterior lighting and lighting infrastructure and controls as required. This measure may include code required upgrades for installation and final acceptance of the proposed energy upgrades.	1-2
General Conservation Measures		Rank
ANX-G1	Building Envelope Improvements: This measure will include repairing, sealing, refinishing building envelope air gaps and eliminate loses due to infiltration. Investigate existing door opening and address the need to refurbish or replace to reduce heat loss and infiltration and improve safety. Existing window replacement with energy efficient models. This measure may include historical preservation requirements and building code required upgrades for installation and final acceptance of the proposed energy upgrades.	2-3
ANX-G2	Roof Upgrade: This measure will remove the exiting roof system membrane, insulation, underlaying ballast system, and sheathing, and replace them with a new durable and energy efficiency roof that meets or exceeds current energy code. This measure may include code required upgrades for installation and final acceptance of the proposed energy upgrades.	2-3
ANX-G3	Electrical Upgrade: This measure will upgrade the existing electrical service and infrastructure, designed to maximize efficiency, support future electrification, minimize electrical hazards, and ensure code compliance. i.e. EV Charging Install, energy efficient transformers, load balance, critical load support. This measure may include code required upgrades for installation and final acceptance of the proposed energy upgrades.	2-3
ANX-G4	Solar: This measure will investigate installing, solar electricity generation system and/or solar thermal systems on the roof to reduce carbon emissions and lower energy costs. Investigation will include battery storage for peak load reductions, power backup, and onsite resilience.	2-3

PAYBACK RANK NOTES:

- 1) Measures that are likely to pay for themselves through energy savings and utility incentives.
- 2) Measures that may pay for themselves, or may require some capital infusion
- 3) Measures that will require significant (>50%) capital infusion

Measurement and Verification (M&V) Plan for documenting energy savings, including specifying utility rates to be used, methodology, post-construction equipment adjustment and any recommendation to continue or discontinue M&V reporting beyond the first 12-months post-installation, consistent with the International Performance Measurement and Verification Protocol (IPMVP), specifying how the cost of M&V was determined if they exceed 10% of cost savings.

B. Architectural and Engineering Studies and Design:

Ameresco and its design subconsultants will provide the following services during the Audit Phase. These services have been included in the audit phase to expedite the development of the first phase of construction and to inform the design for future phases. The design for the Armory Facilities will be informed by previous community engagement documents. (The 2022 Concept Plan and the notes/interviews from the 2023 Arts Interventions, as well as consultation of selected future tenants, artists, and City staff)

Architectural Design:

- The architectural design will provide conceptual design, space planning, ADA and Life Safety design requirements, historical preservation requirements and development of detailed architectural plans and elevations. The architectural design will include Heritage Capital Grant requirements. The Architectural work will include design documents for the first phase of work and additional design development documents for planning of future phases. The Architectural work does not include design of construction documents for future phases of work beyond phase 1.
 - Deliverables: Schematic Design Documents (Phase 1 and future phases), Design Development Document Review Set (Phase 1 and future phases), and Design Development Documents and Specifications (Phase 1).

Mechanical and Electrical Design:

- The Mechanical and electrical design will provide an evaluation and optimization of upgraded HVAC, plumbing, and electrical systems for energy-efficiency operation, as part of the ECM's, and for ADA and Life Safety design requirements. The Mechanical and Electrical work will include design documents for the first phase of work with provisions for implementation of work not included in the first phase.
 - Deliverables: Schematic Design Documents (Phase 1 and future phases), Design Development Document Review Set (Phase 1 and future phases), and Design Development Documents and Specifications (Phase 1).

Seismic Study and Structural Design:

- Seismic analysis of the existing facilities to determine required facility upgrades for current building codes. A feasibility narrative will be included to investigate required upgrades to become a level 4 emergency shelter. The structural design will provide design documents for implementation of the required upgrades and design components to implement the Energy Conservation Measures. The Structural design will include considerations and future phases of work but does not include design of these future phases.
 - Deliverables: Schematic Design Documents (Phase 1 and future phases), Design Development Document Review Set (Phase 1 and future phases), and Design Development Documents and Specifications (Phase 1).

Civil Design:

- The civil engineering is required during the first phase to get Land Use approval from the City of Olympia. The civil design for this first phase will include pre submission and Land Use meetings and required submittals, anticipated minimal frontage improvements required by the city, site layout and grading design, along with stormwater management, and infrastructure planning as required for land use approval. A preliminary study of traffic and parking will be evaluated during the preliminary stages, but a full traffic and parking study has not been included in the study and design effort. If a full traffic and parking study is required, they can be provided as an additional service and a proposal for such services will be provide by Ameresco to the City of Olympia for review and approval. Design

development plans will be provided for implementation of site improvements that are not included in the first phase of work.

- Deliverables: Submittals for Land Use approval. Schematic Design Documents (Phase 1 and future phases), Design Development Document Review Set (Phase 1 and future phases), and Design Development Documents and Specifications (Phase 1).

Hazardous Material Testing:

- The last hazardous material testing was conducted in 1994. It is understood that hazardous materials are present in the facilities. Comprehensive testing and evaluation of hazardous materials will include a design for safe removal and disposal of all hazardous material that will be affected by the implementation of Energy Conservation Measures during the first phase of construction. Consideration in testing and abatement design will be given for future phases of work.
 - Deliverables: Hazardous Material Testing Report, Hazardous Material Abatement Design Documents.

Pre-Construction Consulting:

- Pre-Construction Consulting will provide strategic planning for the first phase project execution and future phase planning including budgeting, scheduling, and risk management consultation.
 - Deliverables: Consulting will inform design throughout the design process, deliverables may include budgets, schedules, and redlined drawings.

Destructive Testing:

- Destructing Testing will assist the engineering consultants with controlled testing to assess material integrity. The testing will provide crucial information and will form recommendations based on test results on how best to proceed with required or desired facility upgrades. By conducting destructive testing during audit and study process it will help prevent future unknowns found during the construction process which saves time and money.
 - Deliverables: Consulting will inform design throughout the design process.

Geotechnical Survey:

- The Geotechnical Survey is required as part of the seismic analysis of the facilities. The investigation informs requirements for the structural analysis and design.
 - Deliverables: Geotechnical Survey Report.

Site Survey:

- The detailed surveying of existing site conditions, documenting topography, utilities, and other relevant data helps inform part of the architectural, mechanical, electrical, and civil designs.
 - Deliverables: Survey Design Drawings.

Acoustical Consultancy:

- Since the facilities are changing use and becoming an Art Campus which may include spaces for concerts, performances, music creations and other artistic performances where acoustics are imperative Ameresco has included a budget for acoustical consultancy. This would include assessment and preliminary support for optimal acoustics in renovated spaces affected during the first phase of construction. This budget does not include acoustical design of specific spaces within the facility as space usage has not been determined at this time. Preliminary Acoustical analysis is provided for the drill hall, the north side of the back annex, the basement and AV/Video rooms.
 - Deliverables: Consulting will inform design throughout the design process.

Audio-Video Design Consultation:

- Since the facilities are changing use and becoming an Art Campus which may include spaces for concerts, performances, presentations, and other artistic performances where audio and video components would be needed Ameresco has included a budget for Audio-Video consultancy. This

would include assessment and preliminary support for infrastructure implementation of renovated spaces affected during the first phase of construction. This budget does not include audio and video design of specific spaces within the facility as space usage has not been determined at this time. Preliminary Audio-Video analysis is provided for the drill hall, the north side of the back annex, the basement and AV/Video rooms.

- Deliverables: Consulting will inform design throughout the design process.

Kitchen Design Consultancy:

- The kitchen design consultant will provide guidance on kitchen layout, equipment selection, and preliminary design to optimize workflow and efficiency. The consultation will include the evaluation of using the kitchen upgrade to be a demonstration project for all electric equipment or other options for efficient operation for the Armory. The design of kitchen will also help inform the mechanical and electrical requirements for inclusion in the first phase energy conservation measure upgrades. Kitchen upgrade may or may not be included in Phase 1 construction but will be included in the design for the entire project.
 - Deliverables: Consulting will inform design throughout the design process. Deliverables will include equipment cutsheets and preliminary kitchen layout.

Cost Effectiveness Criteria

Ameresco will develop a project proposal that will fit within the City of Olympia's current 8-million-dollar budget for the initial phase of work. In the initial phase of the project, the primary focus is to ensure the facility undergoes a transformation, aligning with the overarching goal of making it safe, accessible, and functional. The cost-effectiveness criteria include measures that supports the facilities change of use to open, be accessible and safe to the community/staff and benefits the building to receive occupancy from the authority having jurisdiction (AHJ). Below is a list of priorities for the Olympia Armory Facilities, the goal is to address and implement as many priorities as possible in the Phase 1 project scope. It should be noted that to fit within the current budget not all priorities may be implemented in the initial phase project. Ameresco will continue to work with the City of Olympia to find additional funding opportunities, so that future ECM's can be implemented as additional funds become available.

The cost of the project proposed within the ESP will include: the cost of the investment grade audit and preparation of the energy services proposal; project design; construction; ESCO's construction and project administration; DES's project management fee; system commissioning; bidding; bonding; overhead and profit; permits; taxes; training; cost and saving guarantees, and other costs that may be agreed to by the ESCO PM and the Client Agency.

Project funding may come from: ESCO financing, ESCO arranged Municipal Lease financing, State Treasurer's LOCAL Program, Other third-party financing (banks, etc.), energy cost savings, utility cost savings, capital contributions, and approved O&M savings, grants, loans and/or incentives from utilities or other funding sources.

The priorities for phase 1 are outlined below.

- Design and Study (seismic studies): Providing a solid foundation for subsequent improvements.
- Compliance with Building Code Requirements: Ensuring adherence to regulatory standards.
- Elevator Installation: Enhancing accessibility for all users.
- Fire Sprinkler and Alarm Systems: Ensuring comprehensive safety measures are in place.
- Electrical and HVAC Upgrades: Improving overall efficiency and functionality.
- ADA Access and ADA-Compliant Bathrooms: Prioritizing accessibility and inclusivity in design.
- Plumbing Enhancements: Improving infrastructure and functionality.
- Lighting Upgrades: Enhancing, efficiency, functionality and aesthetics.
- Windows Replacement and Doors Cleaning, Caulking, and Painting: Improving building efficiency and the overall appearance.

- Securing the Building Envelope.
- Drill hall Rehabilitation: Enhancing the functionality of the facility.
- Landscape and Frontage Attention: Enhancing external aesthetics and accessibility.
- Security/IT (Infrastructure Only, Coordination with the City): Enhancing Safety, accessibility, and functionality.
- Kitchen Upgrade: Improved Functionality and Service opportunities of facility. Consideration for future enhancements, allowing for a phased approach.

Historical Preservation Criteria

It is understood that the Ameresco and its partners must maintain the historical appearance of the building in accordance with the State Historical Preservation Office (SHPO).

Fee for Engineering Audit and Design Services:

Ameresco, with collaboration of the Olympia Armory and Washington DES is proposing to expand the IGA investigation beyond only first phase priorities and address future design considerations. The goal is to design the upgrades in an approach that minimizes rework, reducing future costs in subsequent phases.

A. Basis and amount:

Energy Audit and Audit Report, Studies and Testing and Pre-Design Efforts: \$344,000

Given the diverse nature of the project the audit fee includes of the following services: preliminary architectural support (building envelope, elevator), mechanical (HVAC, plumbing), electrical (power, lighting) structural (seismic study), civil (land use, utility), plumbing/sewer assessment, hazardous material testing and abatement design (asbestos, lead, etc.), geotechnical (to support seismic study), site survey, and pre-construction consulting, destructive and non-destructive testing.

TASK	Project		Field Audit		Admin. Assistant	Total Hours
	Manager	Construction Manager	Project Engineer	Technician / TAB / Cx		
Field/Audit	40		80	8	16	144
Analysis/Calculations	120		160	40		320
Evaluation of ECMs	60		80			140
Report Write-up	20		40		8	68
Customer Presentation	12		12	10	4	38
Travel	8		16	8		32
Total Hours:	260	0	388	66	28	742
Hourly Rate:	\$ 157	\$ 145	\$ 145	\$ 121	\$ 78	
Estimated Fee for Services:	\$ 40,820	\$ -	\$ 56,260	\$ 7,986	\$ 2,184	\$ 107,250
<u>Additional Studies and Analysis</u>						
Energy Modeling & LCCA						\$ 16,500
Seismic and Geotechnical Study						\$ 43,400
Destructive & Non-Destructive Testing, Pre Construction Services						\$ 81,000
Hazardous Material Testing and Design						\$ 34,750
Site Survey						\$ 12,800
Pre-Design Support (AMEPS&C)						\$ 48,300
				Materials Cost - Fault Analytics		\$ -
				Total Audit Fee - Energy Project:		\$ 344,000

Design Fees (Includes design for first phase of work and future phase design development efforts): \$476,000

TASK	Design Total	Notes:
Architectural Design Services	101,400.00	
Mechanical/Electrical/Plumbing Design Services	174,600.00	
Structural/Seismic Design Services	127,300.00	
Civil Engineering Design Services	26,300.00	
Landscape Architectural Design Services	-	Provided by City
Accoustical Consultancy	7,000.00	
Audio Video Consultancy	10,000.00	
Kitchen Design Consultancy	4,000.00	
AMEPS&C Bidding & Pre Construction Services	25,400.00	
Design Fee	\$ 476,000.00	

The proposal includes design for the first phase of construction and design development design for the overall project of the following services: architectural, mechanical, electrical, structural, civil, acoustical engineering, audio-video design consultation, and kitchen design consultancy.

It is understood by Ameresco that payment and terms are contingent upon the requirements set forth in the Energy Services Proposal.

Schedule for Engineering Services:

The Energy Audit report will be completed for review 140 days of notice to proceed. The energy audit report will include ECM's outlined within this report and any additional ECM opportunities found throughout the audit phase. The target date for the Energy Audit report is June 20st, 2024.

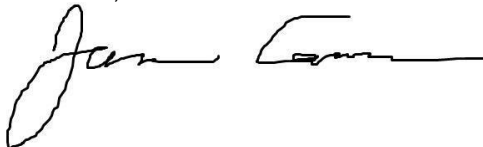
The Energy Services Proposal will be completed within 45 days of acceptance of the Energy Audit report. The target date for delivery of the ESP is August 5th, 2024

This timeline ensures a comprehensive yet efficient execution of the audit, encompassing design and study, seismic studies, and design of the facilities improvements through the Phase 1 project objectives and enough detail for to inform future design and construction phases.

Regular milestone reviews and progress meetings will be integral components of the schedule, allowing for real-time adjustments and ensuring that the project remains on track for successful completion by the specified deadline. This timeline reflects our commitment to delivering high-quality services within the defined timeframe, meeting and exceeding the expectations set forth for the project.

We at Ameresco, Inc. appreciate the opportunity to provide these services. If this proposal for Audit Services is satisfactory, please forward contract documents.

Sincerely,
Ameresco, Inc.



Jason Carver, P.E
Project Development Manager