

Mesa Energy Systems, Inc.

AB841 HVAC Estimate

Presented to:

Wheatland School District- Wheatland Elementary

Prepared by:

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CA license #: 611215

Due to uncertainty related to foreign steel and aluminum tariffs, the price quoted herein can only be held for thirty days from the date of this proposal.

Scope of Work

Filter Replacement:

- Filter quantities and sizes to be verified on site prior to ordering.
- **Qualified Testing Personnel** shall review system capacity and airflow to determine the highest MERV filtration that can be installed without adversely impacting equipment, shall replace or upgrade filters where needed, and shall verify that those filters are installed correctly.
- If a system uses ultraviolet germicidal irradiation (UVGI) to disinfect the air, the UVGI lamp shall be checked for proper operation, replacing bulbs as needed and verifying that the ultraviolet light does not shine on filters
- For systems with economizers, Qualified Testing Personnel shall test system economizer dampers pursuant to Section B of CEC form CEC-NRCA-MCH-05-A–Air Economizer Controls.
 - Economizer dampers and controls that are not properly functioning shall be repaired by a Skilled and Trained Workforce. The costs associated with any additional repairs and replacements is not included in the proposed cost and will be itemized for the District to fund by the 20% contingency fund.
- Replace existing filters with a minimum efficiency of MERV 13 or better, in the HVAC systems, where feasible.
- Recommendations for additional maintenance, replacement, or upgrades to the above will be recorded in the HVAC Assessment Report.

HVAC Assessment:

- HVAC quantities and types to be verified on site prior to starting work.
- **Qualified Testing Personnel** to verify ventilation rates in facility classrooms, auditoriums, gymnasiums, nurses offices, restrooms, and other occupied areas to assess whether they meet the minimum ventilation rate requirements set forth in **Table 120.1-A of Part 6 (commencing with Section 100.0) of Title 24 California Code of Regulations**. The HVAC assessment shall include the following:
 - Calculation of the required minimum outside air ventilation rates for each occupied area based on the anticipated occupancy and the minimum required ventilation rate per occupant set forth in Table 120.1-A. Calculations shall be based on maximum anticipated classroom or other occupied area occupancy rates and determined by the performing technician. Natural ventilation shall be designed in accordance with Section 402.2 of the California Mechanical Code (Part 4 [commencing with Section 1.1.0] of Title 24 of the California Code of Regulations) and shall include mechanical ventilation systems designed in accordance with Section 403.0, Section 404.0, or both sections, of the California Mechanical Code.
 - Measurement of outside air under Section B of CEC form CEC-NRCA-MCH-02-A–Outdoor Air Acceptance and verification of whether the system provides the minimum

- outside air ventilation rates
- Survey readings of inlets and outlets to verify all ventilation is reaching the served zone and there is adequate distribution. Verify if inlets and outlets are balanced within tolerance of the system design. Document read values and deficiencies.
- Verification of building pressure relative to the outdoors to ensure positive pressure differential and ensure the building is not over-pressurized
- Verification of coil velocities and coil and unit discharge air temperatures required to maintain desired indoor conditions and avoid moisture carryover from cooling coils.
- Verification that separation between outdoor air intakes and exhaust discharge outlets meet requirements in Section 120.1 of the California Building Code.
- Confirmation that the air-handling unit is bringing in outdoor air and removing exhaust air as intended by the system design.
- Measurement of all exhaust air volume for exhaust fans, including restrooms. Document any discrepancies from system design.
- If the system does not meet the minimum ventilation rate requirements set forth in Table 120.1- A, a licensed professional or qualified adjusting personnel, as defined in PUC Sections (c) and (g) respectively, will review the system airflow and capacity to determine if additional ventilation can be provided without adversely impacting equipment performance and building indoor environmental quality.
- If additional ventilation can be provided, a qualified adjusting personnel will adjust ventilation rates to meet the minimum ventilation rate requirements set forth in Table 120.1-A to the extent feasible and measurements and verifications related to outside air, building pressure, coil velocities and DAT shall be repeated after adjustment.
- If a demand control ventilation is installed, it will be adjusted to a carbon dioxide set point of 800 ppm or less and tested following Section B of CEC-NRCA-MCH-06-A– Demand Control Ventilation Systems Acceptance.
 - If the demand control ventilation system does not maintain average daily maximum carbon dioxide levels below 1,100 ppm, it will be disabled until such time as the LEA determines that the COVID-19 crisis has passed, unless disabling the control would adversely affect operation of the overall system.
 - When disabling a demand control ventilation system, the system will be configured to meet the minimum ventilation rate requirements and tested and adjusted to provide a notification through a visual indicator on the monitor, such as an indicator light, or other alert system, such as an electronic mail, text, or cellular telephone application, when the carbon dioxide levels in the classroom have exceeded 1,100 ppm.
- **A Qualified Testing Personnel** or a skilled and trained workforce will verify the following items:
 - Coil condition.
 - Condensate drainage.
 - Cooling coil air temperature differentials (entering and leaving dry bulb).
 - Heat exchanger operation
 - Drive assembly.
 - If repairs, replacement, or upgrades are necessary, these deficiencies will be reported in the HVAC Assessment Report

- A **Qualified Testing or Adjusting Personnel** will review control sequences to verify systems will maintain intended ventilation, temperature, and humidity conditions during school operation.
 - For previously unoccupied buildings, perform the recommended practices of reopening a building as covered in the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Building Readiness document — Restarting a Building.
 - Verify a daily flush is scheduled for two hours before and after scheduled occupancy or demonstrate calculation of flush times per ASHRAE Guidance for Reopening and Operating Schools and Buildings or otherwise applicable local or state guidance.
 - Verify that HVAC system operational times, exhaust fans operation times, setpoints, and enabled features meet ASHRAE Guidance for Reopening and Operating Schools and Buildings or otherwise applicable local or state guidance.
 - If installed HVAC systems or system components are broken, fail to meet minimum ventilation requirements, or are unable to operate to the original design and intent, this information will be included in the HVAC Assessment Report which will be provided to a Licensed Professional for determination of appropriate corrective measures. Repairs, upgrades, or replacements will be performed by a Skilled and Trained Workforce.

HVAC Assessment Report:

- EMCOR will provide an HVAC Assessment report that has been prepared by a **Qualified Testing Personnel or Qualified Adjusting Personnel**. HVAC assessment report to include:
 - Name and address of school facility and person preparing and certifying HVAC Assessment Report.
 - Documentation of HVAC equipment model number, serial number, general condition of unit, and any additional information that could be used to assess replacement and repair options given potential for increased energy efficiency benefits.
 - Either verification that MERV 13 filters have been installed or verification that the maximum MERV-rated filter that the system is able to effectively handle has been installed and what that MERV rating is.
 - The verified ventilation rates for facility classrooms, auditoriums, gymnasiums, nurses' offices, restrooms, offices, and other occupied areas, and whether those rates meet the requirements set forth in Table 120.1-A. If ventilation rates do not meet applicable requirements, then an explanation for why the current system is unable to meet those rates will be provided.
 - The verified exhaust for facility classrooms, auditoriums, gymnasiums, nurses' offices, restrooms, and other occupied areas and whether those rates meet the requirements set forth in the design intent.
 - Documentation of system deficiencies and recommendations for additional maintenance, replacement, or upgrades to improve energy efficiency, safety, or performance.
 - Name of the utility that provides electricity service and monthly electricity meter data.

Terms and Conditions

- A. Unless stated otherwise in this agreement, services provided under this agreement will be performed during normal working hours of 7 a.m. to 5 p.m., Monday through Friday.
- B. The guarantees and services provided under the scope of this agreement are conditioned upon Wheatland Unified operating and maintaining systems/equipment. Wheatland Unified will do so in accordance to industry-accepted practices, or in consideration of our recommendations.
- C. Wheatland Unified will provide and permit reasonable access to all areas where work is to be performed. Mesa Energy Systems, Inc. will be allowed to start and stop equipment as necessary to perform its services and be permitted use of existing facilities and building services.
- D. Any repairs or services resulting from power failures, freezing, roof leaks through curbs or equipment, or air side corrosion will be paid for by the Wheatland Unified in accordance with Mesa Energy Systems, Inc.'s currently established rates.
- E. The agreement does not include responsibility for system design deficiencies, such as, but not limited to poor air distribution, water flow imbalances, system equipment and component obsolescence, electrical failures, unserviceable equipment, and operating the system(s), unless otherwise stated in this Agreement.
- F. Mesa Energy Systems, Inc. will not be liable for delays or failure to obligate due to fire, flood, strike, lockout, freezing, unavailability of material, riots, acts of god, or any cause beyond reasonable control.
- G. Mesa Energy Systems, Inc. is not responsible for the removal or disposal of any hazardous materials or any cost associated with these materials unless otherwise noted in this Agreement.
- H. The agreement does not include repairing any damage resulting from improper/inadequate water treatment or filter service not supplied by Mesa Energy Systems, Inc.
- I. This agreement does not include any services occasioned by improper operation, negligence, vandalism, or alterations, modifications, abuse, or misuse, or repairs to equipment not performed by Mesa Energy Systems, Inc. Unless otherwise agreed, also excluded is the furnishing of materials and supplies for painting or refurbishing existing equipment.
- J. Mesa Energy Systems, Inc. shall not be required to furnish any items of equipment, labor, or make special tests recommended or required by insurance companies, Federal State Municipal or other authorities except as otherwise included in this Agreement.
- K. In the event either party must commence a legal action in order to enforce any rights under this contract, the successful party shall be entitled to all court costs and reasonable attorney's fees as determined by the court for prosecuting and defending the claim, as the case may be.
- L. Mesa Energy Systems, Inc. shall not be liable for the operation of the equipment nor for injuries to persons or damage to property, except those directly due to the negligent acts or omissions of its employees and in no event shall it be liable for consequential or speculative damages. It shall not be liable for expense incurred in removing, replacing or refinishing any part of the building structure necessary to the execution of this Agreement. It shall not be held liable for any loss by reason of strikes or labor troubles affecting its employees who perform the service called for herein, delays in transportation, delays caused by priority or preference rating, or orders or regulations established by any government, authority, or by unusual delays in procuring supplies or for any other cause beyond its reasonable control.
- M. Only Mesa Energy Systems, Inc.'s personnel or agent are authorized to perform the work included in the scope of this agreement. Mesa Energy Systems, Inc. may, at its option, cancel or waive its obligations under this Agreement should non-authorized individuals perform such work.
- N. This Agreement and all rights hereunder shall not be assignable unless approved by Mesa Energy Systems, Inc. In the event of additional freight, labor, or material costs resulting from a Wheatland Unified's request to avoid delays with respect to equipment warranties, or accelerated delivery of parts and supplies, the customer agrees to pay these additional costs at Mesa Energy Systems, Inc.'s currently established rates.
- O. Mesa Energy Systems, Inc.'s scope of work shall not include the identification, detection, abatement, encapsulation or removal of asbestos or products or materials containing asbestos or similar hazardous substances. In the event Mesa Energy Systems, Inc. encounters such material in performing its work, Mesa Energy Systems, Inc. will have the right to discontinue work and remove its employees until the hazard is corrected or its determined no hazard exists.
- P. This Agreement contains the entire Contract and the parties hereby agree that this Agreement has been agreed to and the entire Agreement is then accepted and approved by an authorized person for both parties, and no statement, remark, agreement or, understanding, oral or written, not contained herein, will be recognized or enforced.
- Q. This agreement does not include the disposal of hazardous waste; any charges incurred for their proper disposal will be borne by the Customer as an extra to the contract price.
- R. The School District agrees that in the event that there shall have been passed a federal and/or state law which shall compel Mesa Energy Systems, Inc. to contribute to a federal and/or state health plan for its employees, then the terms of this Agreement shall be subject to adjustment to the extent that the cost of such mandated contributions increase by Mesa Energy Systems, Inc.'s cost of performing this contract.
- S. The Wheatland Unified acknowledges and agrees that any purchase order issued by Wheatland Unified, in accordance with this Agreement, is intended only to establish payment authority for Wheatland Unified's internal accounting purposes. No purchase order

shall be considered to be a counteroffer, amendment, modification, or other revision to the terms of this agreement. No term or condition included in the Wheatland Unified 's purchase order will have any force or effect.

Project Cost and Timeline Estimate

The total cost estimate, including applicable taxes is shown in the appendix following this proposal.

Wheatland Elementary Start 10/1/2022 Estimated Completion Date 12/31/2023

	Units (#)	Labor Rate	Labor Hours	Total Labor Costs	Material Costs	Totals
maintenance and Assessment	# 33 HVAC Units	\$200.00/Hr	165 Hours	\$33,000.00	\$0.00	\$33,000.00
		\$200.00/Hr	50 Hours	\$10,000.00	\$0.00	\$10,000.00
Filters	#114	\$200.00/Hr	28.5 Hours	\$ 5,700.00	\$2,850.00	\$8,550.00
Monitors & Classroom Counts	#26	\$200.00/Hr	26 Hours	\$ 5,200.00	\$10,400.00	\$15,600.00
						Total Project Cost \$67,150.00

This proposal, scope of work, and pricing is valid for 30-days from the date listed on this proposal.

Payment Terms

30% Mobilization due net 30-days

Remaining balance paid via progress billings due net 30-days

Authorization and approval is contingent on approval from the CEC and/or state with authorized funding for the exact amount provided in this proposal.



Agreement Execution

This agreement defines the understanding of services between Mesa Energy Systems Inc. and Wheatland School District. This agreement shall begin on Wheatland School District 's Acceptance Date, or upon receipt of a Letter of Intent.

Wheatland School District Acceptance:

Craig Guensler

Signature

Craig Guensler

Printed Name

Superintendent

8/22/2022

Title

Date

Mesa Energy Systems Inc:

Kendrick Kiefert

Signature

Kendrick Kiefert

Printed Name

Account Manager

8.2.2022

Title

Date

Company Profile

1. Mesa Energy System, Inc.
 - a. Corporation
 - b. 2 Cromwell, Irvine CA, 92618
 - c. Approximately 800 Current Employees
 - d. Company Established in 1985
 - e. Current Certifications (C20, C10, B, C38, C36, C04, C46
 - f. Approximately 500 Completed Commercial HVAC Retrofit Projects Since 2012
 - g. President, CEO Robert Lake
 - h. Project Manager, Jason Carrere, (530) 870-6450, jcarrere@emcor.net

EMCOR SERVICES / MESA ENERGY SYSTEMS QUALIFICATIONS

EMCOR Services Mesa Energy Systems (EMCOR/Mesa) is a wholly owned subsidiary of EMCOR Group, Inc. EMCOR Group is a Fortune 500 global leader in mechanical and electrical construction, energy, and facilities services. FORTUNE Magazine named EMCOR “2011 Fortune's Most Admired Company’s” and EMCOR is again ranked #1 as the World's Most Admired Company in the Engineering and Construction Category. This is the third consecutive year as #1 in the World and the fourth consecutive year as #1 in America.

EMCOR/Mesa is a licensed HVAC maintenance, service, building automation, and retrofit contracting company, headquartered in Irvine, California. We have 10 offices blanketing Southern and Northern California. The recent demands of the marketplace have transformed us into an Energy Solutions Company, assisting our customers in achieving optimal building energy performance, improved maintenance, ongoing retrofit, and ongoing commissioning resulting in favorable ROI energy retrofits.

Collectively, EMCOR/Mesa has completed more than 50,000 mechanical and BAS-type projects nationwide, including more 500 projects for buildings in Southern California that have in excess of 500,000 square feet. Since our inception in 1983, EMCOR/Mesa has remained steadfast in our commitment to exceptional safety standards and quality construction. We have earned a reputation for providing value to our many satisfied customers through high-quality services, and efficient, cost-effective, customized retrofit solutions.

To meet these challenges, EMCOR/Mesa has assembled a team of outstanding capabilities and reputations for ethical business practices; assigned our most experienced and

SERVICES PROVIDED:

- HVAC Service & Retrofit
- Central Plant Optimization
- Energy Analysis
- DDC Controls
- Variable Frequency Drives
- Building Automation
- Operations & Maintenance
- Demand Response
- Smart Grid



using

than

with

talented project management and support staff; and developed an approach that delivers best-value to GALT JOINT UNION ELEMENTARY on this critical contract.



EMCOR/MESA PAST PERFORMANCE

The EMCOR/Mesa Team has successfully completed relevant projects for many clients throughout Southern California and nationwide. The Team has demonstrated successful implementation of management actions to identify and mitigate potential problems while providing quality products and services safely, within budget, and on schedule.

RECENT PROJECTS

Recent relevant local projects include:

Client	Location	Scope of Work	Contact Information
Universal Hilton	Universal City CA	Design build retrofit of a 1000 ton central plant with an all Variable Speed chiller and pumping system and DDC controls, Solving Main Ball room and Foyer heating and control issues. Control upgrade of main area air handling units. Largest PACE program funded in the US to date	Steve Thompson Facilities Manager 818.506.2500
Pasadena Unified School District (PUSD)	Pasadena, CA	EMCOR/Mesa has completed installations/integrations/retrofits/repairs of systems (including 21 chillers, 14 Turbocor compressors, 2 Optimum Loop Controls, 46 VFDs, multiple dampers, and electrical systems) at more than 12 elementary/middle/high schools (more than 3 million GSF) totaling more than \$4.9M	Frazer Thompson Owner's Rep. 661.607.5891
Pasadena City College	Pasadena, CA	EMCOR/Mesa completed a \$3.1M project for the installation/replacement of two 500 ton chillers and eight associated pumps, pipes, DDC controls, six large DX coils, ASHRAE 15 ventilation system, Optimum	Sam Kazarian Chief Engineer 818.321.1412

		Loop Control system, electrical conduit and wiring for a facility larger than 500,000 GSF.	
California Institute of Technology	Pasadena, CA	EMCOR/Mesa completed \$800K in VFD, HVAC, and controls installation/repairs for facilities totaling more than 1 million GSF.	Matthew Berbee Energy Manager 626.399.1915
US Federal Courthouse, 300 Los Angeles St	Los Angeles, CA	Under this \$2.4M project, EMCOR/Mesa installed 2,700 tons of York YK chillers, VFD retrofit of 2850 tons of Trane CVHF and CDHP chillers, Separation of 150 and 300 PSI plants, Variable CHW and CDW pumping, CHW coil replacement and DDC controls upgrade without disruption to 2.5 million square feet of federal building operations.	Stevie Martin Facilities Manager 213.625.2274

PAST PERFORMANCE MATRIX

The matrix listed on the pages that follow includes a snapshot of many other projects that we have completed throughout Southern California.

Building Name, Location	SF	Value	Cooling Tower Repair	VFD Installation	HVAC Installation	HVAC Repair	Large Chiller Replacement	Controls Installation	Controls Programming	Metering Installation	HVAC and Controls D-B	Timely Project Completion (2)	Quality Project Completion (5)	Met All Expectations (6)	Will Use EMCOR/Mesa on Future Projects
GSA Federal Courthouse, Los Angeles, CA	>500,000	\$890K			◆			◆	◆		◆	◆	◆	◆	◆
Jerry L. Pettis Veterans Hospital, Loma Linda, CA	>500,000	\$5.0M	◆	◆			◆					◆	◆	◆	◆
Providence Tarzana Medical, Tarzana, CA	>500,000	\$800K		◆			◆	◆	◆			◆	◆	◆	◆
Harman Business, Complex, Northridge, CA	600K	\$340K			◆							◆	◆	◆	◆
Travis AFB, David Grant Medical Center, Fairfield, CA	>500,000	\$18M			◆						◆	◆	◆	◆	◆
Pasadena City College, Pasadena, CA	>500,000	\$3.2M	◆	◆	◆		◆	◆	◆		◆	◆	◆	◆	◆

Building Name, Location	SF	Value	Cooling Tower Repair	VFD Installation	HVAC Installation	HVAC Repair	Large Chiller Replacement	Controls Installation	Controls Programming	Metering Installation	HVAC and Controls D-B	Timely Project Completion (2)	Quality Project Completion (5)	Met All Expectations (6)	Will Use EMCOR/Mesa on Future Projects
Pasadena Unified School District, Pasadena, CA	>500,000	\$893K		◆	◆	◆		◆	◆		◆	◆	◆	◆	◆
Pasadena Unified School District, Pasadena, CA	>500,000	\$234K						◆	◆		◆	◆	◆	◆	◆
Pasadena Unified School District, Pasadena, CA	>500,000	\$395K							◆			◆	◆	◆	◆
Pasadena Unified School District, Pasadena, CA	1.5 M	\$3.4M		◆	◆	◆		◆	◆		◆	◆	◆	◆	◆
Torrance Memorial Medical Center, Torrance, CA	>500,000	\$66K	◆									◆	◆	◆	◆
La Paz Building 7, Laguna Hills, CA	>500,000	\$165K			◆							◆	◆	◆	◆
Cal State LA Plant Refurbishment, Los Angeles, CA	>500,000	\$393K	◆	◆		◆		◆	◆	◆	◆	◆	◆	◆	◆
Cal Tech Institute Energy Conservation Measures - Phase 1, Pasadena, CA	>500,000	\$333K		◆	◆	◆		◆				◆	◆	◆	◆
Cal Tech Institute Energy Conservation Measures - Phase 2, Pasadena, CA	>500,000	\$477K		◆	◆	◆		◆				◆	◆	◆	◆
City National Plaza Cooling Towers, Los Angeles, CA	2.5 M	\$62K	◆	◆				◆				◆	◆	◆	◆
Pasadena City College, Pasadena, CA	>500,000	\$462K	◆	◆		◆		◆				◆	◆	◆	◆
Historic Mission Inn Hotel Central Plant, Riverside, CA	>500,000	\$135K	◆	◆	◆		◆	◆				◆	◆	◆	◆
Pasadena City College, Pasadena, CA	>500,000	\$833K	◆					◆				◆	◆	◆	◆
City National Plaza 35 Boilers Project, Los Angeles, CA	2.5 M	\$684K			◆			◆				◆	◆	◆	◆
City National Plaza Cooling Towers, Los Angeles, CA	2.5 M	\$264K	◆					◆				◆	◆	◆	◆
300 N. Brand Building, Pasadena, CA	>200,000	\$637K	◆	◆	◆		◆	◆	◆		◆	◆	◆	◆	◆
2700 Colorado Avenue Building, Pasadena, CA	>500,000	\$43K	◆									◆	◆	◆	◆

Building Name, Location	SF	Value	Cooling Tower Repair	VFD Installation	HVAC Installation	HVAC Repair	Large Chiller Replacement	Controls Installation	Controls Programming	Metering Installation	HVAC and Controls D-B	Timely Project Completion (2)	Quality Project Completion (5)	Met All Expectations (6)	Will Use EMCOR/Mesa on Future Projects
Antelope Valley Hospital, Lancaster, CA	700,000	\$600K					◆	◆	◆		◆	◆	◆	◆	◆
City National Plaza 35 Boilers Project, Los Angeles, CA	2.5 M	\$208K		◆	◆			◆		◆		◆	◆	◆	◆
City National Plaza Cooling Towers, Los Angeles, CA	2.5 M	\$62K	◆	◆				◆				◆	◆	◆	◆
City National Plaza Boilers and Piping, Los Angeles, CA	2.5 million	\$37K					◆					◆	◆	◆	◆
Pasadena City College, Pasadena, CA	> 500,000	\$76.6K					◆					◆	◆	◆	◆