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Kaveen Patel Comments - HVAC Upgrade and Repair Grant

Please see submitted attachment.

Additional submitted attachment is included below.



Kaveen Patel Jackson & Blanc 7929 Arjons Dr, San Diego CA January 25, 2023

CalSHAPE Program Team California Energy Commission 715 P Street Sacramento CA, 95814

Please consider the following U&R Grant comments, based on the U&R Grant Workshop Presentation.

- "Two-year term for projects to be completed."
 - A longer project term should be implemented for the following reasons:
 - Equipment lead times from many of the largest HVAC manufacturerers are the longest they have been in years. Due to supply chain issues, we have seen that 50+ week lead times have become the new normal for large orders of standard unitary HVAC equipment.
 - LEA's will need to schedule all HVAC replacement work around school schedules and summer school schedules. In many cases, this will need to be coordinated up to a year in advance.
- "\$20,000 fixed amount for soft costs....soft costs to include: Project management, Permitting, Engineering and Design fees, Building automation"
 - In our experience, these soft costs can range widely based on the scope of work determined to be necessary. An alternate cost determination such as an itemized proposal or variable percentage should be considered in place of a fixed soft cost for reasons such as the following:
 - Where an existing building/energy management system does not exist, the cost to implement a Building/Energy Management system will run approximately 20-25% of the mechanical scope cost. Where a building/energy management system does exist, the cost to disconnect, reconnect, program, and integrate the new HVAC units will run approximately 10% of the mechanical scope cost. Ensuring that these schools are outfitted with proper building/energy management systems is critical to both indoor air quality and energy efficiency.
 - Where structural modifications will be required due to new HVAC units being heavier than the existing units, DSA Review will be triggered at which point we're looking at design engineering fees of approximately 15-20% of the mechanical scope cost to develop engineered plans and work with DSA for inspections, plan submittal, reviews, permits, etc.
 - Where projects are exempt from DSA Review, design engineering fees will likely not need to be allocated. Per IR A-22 "Construction Projects and Items Exempt from DSA Review": replacement of in-kind mechanical (including, but not



limited to, heating, ventilation, air-conditioning) units are exempt from DSA Review when all of the following requirements are met:

- Each new unit must be of equal or lesser weight to the existing unit being replaced, and weigh no greater than 2000 lbs.
- Each new unit must be placed in the same location as the existing unit.
- Each new unit must be placed without requiring alteration to the
 existing structural framing or altering existing supporting curb or
 platform. Exception: Adaptive metal curbs may be utilized provided the
 applied combined gravity plus lateral forces to the structure are not
 increased.
- Each new unit must be placed without requiring alteration to the existing ceiling.
- Each new unit must be placed without requiring replacement of ductwork, grilles, electrical components, etc
- "U&R Grant Estimated Budget: \$192 M"
 - Considering 605 applications have been submitted for the CalSHAPE Ventilation A&M Grant, the funding of only 80-190 school projects for the U&R Grant will likely leave hundreds of LEA's without a path to replace equipment that has been deemed in need of replacement in the professionally engineered assessment reports. I recommend that a second funding round be implemented which would allocate additional funding for these schools and at the very minimum utilize all unused contingency funds from the first phase of the program (CalSHAPE Ventilation A&M Grant).

As always, thank you for the opportunity to provide this public comment. The CalSHAPE Ventilation program continues to be an excellent funding vehicle for California Public Schools to improve indoor air quality and provide a healthy space for students.

Kaveen Patel, PE Sustainability Engineer Jackson & Blanc