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Docket No. 20-RENEW-01 California Energy Commission Docket Office MS-4 1516 1516 Ninth Street Sacramento, CA 95814-5512 School Energy Efficiency Stimulus Program

# Re: <u>JCEEP Comments on School Energy Efficiency Stimulus</u> <u>Program Workshop</u>

Dear Commissioners and Staff:

We are writing on behalf of the Joint Committee on Energy and Environmental Policy ("JCEEP") to comment on topics addressed during the School Energy Efficiency Stimulus Program Workshop held by California Energy Commission ("Commission") staff on April 28, 2021.

JCEEP is an advocacy organization that represents the California sheet metal workers' local unions and over 25,000 technicians working for over 600 contractors throughout California. JCEEP's mission is to promote responsible environmental and indoor air quality and energy policy in California as it pertains to and impacts the heating, ventilation, and air conditioning ("HVAC") industry. JCEEP was formed on the premise that air handling systems need to be designed, built, and maintained not just to manage comfort levels of indoor air, but also to protect against health threats and to ensure energy efficiency. JCEEP's members have over 15 training facilities throughout the state and thousands of workers being trained daily in HVAC specialties, such as testing, adjusting, and balancing, commissioning, green building design, energy efficiency, and indoor air quality.

4003-066j

JCEEP greatly appreciates the staff's continued commitment to create an equitable program consistent with AB 841. Overall, JCEEP supports the Revised Staff Draft Guidelines for the School Reopening Ventilation and Energy Efficiency Verification and Repair Program ("Ventilation Program"). In response to the concerns raised during the workshop regarding a maximum grant award and demonstration of reasonable costs, JCEEP offers an alternative approach aimed at streamlining evaluation of grant applications. In addition, JCEEP addresses several other issues raised by commenters during the workshop and in written comments filed prior to the May 7 deadline.

# A. The Commission Should Streamline the Application Process by Setting a Review Threshold of \$39,000; Any Application that Exceeds the Threshold Must Be Supported by Three Contractor Estimates

Several commenters suggest the Commission should establish a maximum grant award. A maximum award is not appropriate for two reasons. First, setting a maximum presumes school ventilation systems are homogeneous. To the contrary, California school ventilation systems are each unique, varying widely in age, design, use and condition. As a result, there is a high likelihood that schools would not receive sufficient funds to complete all assessment and maintenance activities, which conflicts with AB 841's wholistic approach to addressing inadequate ventilation in schools.

Second, the proposed factors (i.e., student enrollment, classroom quality, facility square footage) are not suitable proxies for determining a maximum grant amount because none of the factors are sufficiently indicative of the type and scope of issues that need to be tackled. A maximum award would not provide equity, because it could result in larger schools or schools with older, more complex systems being unable to perform the minimum tasks necessary to ensure safe and proper ventilation and filtration in classrooms.

The Commission should value program effectiveness over quantity. AB 841 is not the only source of available funds for schools to perform this work. What AB 841 provides is funding for schools where they commit to complying with the

 $\frac{https://efiling.energy.ca.gov/GetDocument.aspx?tn=237239\&DocumentContentId=70422.}{4003-066j}$ 

<sup>&</sup>lt;sup>1</sup> California Energy Commission, Revised Staff Draft Guidelines: School Reopening Ventilation and Energy Efficiency Verification and Repair Program Guidelines (Mar. 2021) (hereinafter "Revised Staff Draft Guidelines"), available at

minimum steps identified in the AB 841 program to assess and meaningfully address ventilation in schools. AB 841 funds a holistic, comprehensive approach to addressing school ventilation that considers the wide variety of systems and system conditions that exist in California schools. Such an approach does not lend itself to setting a maximum grant amount since the cost for each school will be very site specific.

Instead of establishing a maximum grant amount, we recommend that the Commission streamline the application process by setting a reasonable review threshold for costs above which cost-efficiency shall be established by requiring applications to be supported by three bids. If the amount requested is below the threshold, then the application only needs to be supported by a single contractor estimate. If the amount requested is above the threshold, then the application must be supported by three contractor estimates. The purpose of mandating three contractor estimates for applications that exceed the threshold is to provide the Commission with a method for evaluating the reasonableness of the application's cost estimate.

LEAs should be required to provide a rationale for why the final bid estimate selected is the proper amount for the work needed at that school. LEAs must also adhere to its bidding and public contracting requirements consistent with the Public Contract Code regardless of whether the estimate exceeds or falls below the applicable threshold.

We recommend establishing a threshold of \$39,000, which is based on the average amount of funds available per priority school across all utility service areas for AB 841 Program Year 1. Under this approach, an application that exceeds the applicable threshold would be subject to closer scrutiny because the project has a higher potential of substantially reducing the amount of funding available for other schools. Whereas an application that falls below the applicable threshold would be subject to less scrutiny because it would not have the same impact on overall program funds.

This approach addresses two key concerns raised during the workshop. First, it provides greater assurances that the costs are reasonable by requiring three contractor estimates when the requested grant amount exceeds the applicable threshold. Second, it creates a more efficient review process by separating applications based on their potential to reduce overall program funding in the applicable service territory.

Our method for calculating the proposed threshold is set forth in Table 1. The average funds per priority school in each utility service area are based on the total funds provided by the utilities in Year 1 of the Ventilation Program and originate from the estimates presented during the April 28 workshop, rounded down to the nearest \$1,000.<sup>2</sup>

Table 1

Service Territory	Average Program Year 1 Funds Per Priority School
SCE	\$41,000
PG&E Electric	\$27,000
PG&E Gas	\$26,000
SDG&E	\$98,000
SoCalGas	\$3,000
THRESHOLD	\$39,000

Because there is no restriction on how many schools a LEA can include in a single application,<sup>3</sup> a modifier for the threshold may be necessary in situations where a LEA applies for a grant on behalf of multiple schools. In that scenario, we recommend that the base threshold be multiplied by the number of schools included in the application. For example, if a LEA submits an application on behalf of 10 schools, then the applicable threshold would be \$390,000.<sup>4</sup> If a LEA submits an application on behalf of 5 schools, then the applicable threshold would be \$195,000.<sup>5</sup>

It is important to note that the \$39,000 threshold is not tied to any estimate of the average cost of a school for complying with AB 841 requirements. That cost will vary widely depending on the number and types of systems in a school, the condition of the equipment and the number of classrooms and inlets and outlets. We expect that most applications will exceed the \$39,000 threshold. What the threshold does is exempt smaller projects from having to justify the amount requested in the application with three bids on the grounds that projects below this threshold will have less of an impact on the availability of funds for other schools.

<sup>&</sup>lt;sup>2</sup> California Energy Commission, School Energy Efficiency Stimulus Program Workshop (Apr. 28, 2021) p. 20, available at

 $<sup>\</sup>underline{https://efiling.energy.ca.gov/GetDocument.aspx?tn=237554\&DocumentContentId=70763}.$ 

<sup>&</sup>lt;sup>3</sup> Revised Staff Draft Guidelines at p. 8.

<sup>&</sup>lt;sup>4</sup> \$39,000 x 10 schools = \$390,000.

<sup>&</sup>lt;sup>5</sup> \$39,000 x 5 schools = \$195,000. 4003-066j

Above this threshold, the three bid requirement ensures that the cost of this work is reasonable, competitive, and efficient.

Furthermore, the proposed threshold <u>is not</u> an appropriate amount to set as a maximum grant award because, as explained above, we expect that most applications will exceed the threshold. Again, the purpose of the threshold is to establish a means by which the Commission can evaluate the reasonableness of cost estimates submitted with the application, giving greater scrutiny to applications that have a higher potential of reducing overall program funding.

# B. The Commission Should Clarify the Scope of HVAC Assessment and Maintenance Grants

To receive an HVAC Assessment and Maintenance Grant, LEAs must support their applications with a site-specific contractor estimate. However, if the scope of work is not clearly defined, contractors must provide higher estimates to account for unknowns. We recommend that the Commission clarify the Revised Staff Draft Guidelines by further articulating which activities are part of assessment and maintenance, which activities are within the 20% contingency, and which activities are beyond the initial phase of the program. By doing so, the Commission will reduce the number of unknowns and more clearly identify what activities are included within the HVAC Assessment and Maintenance Grant. Our recommended changes are set forth in **Attachment A**.

An important clarification to highlight is the language regarding repair of economizer and damper controls that are not properly functioning. The assessment of economizer and damper controls is a cost that should be included in the HVAC Assessment and Maintenance Grant. However, as currently written, the Revised Staff Draft Guidelines could be read as requiring repairs of economizers and dampers as part of the assessment and maintenance.

The guidelines should address this ambiguity by clarifying that repairs to system components, including repairs to economizer dampers and controls, fall within the 20% contingency, and not within the initial assessment and maintenance. Any necessary repairs above the contingency funds would be documented in the final report, which may be used to seek additional sources of funding.

# C. Contractors that Provide Bid Estimates Are Not Barred from Being Awarded Work on the Project

Some LEAs claim that contractors who provide bid estimates are prohibited from being awarded work on the project. When asked for the basis of this claim, the LEAs cited Section 1090 of the Government Code. However, Section 1090 does not bar contractors that provide bid estimates from working on the project. Such a rule would create an absurdity because all contracts are awarded based on bid estimates.

A contractor is only prohibited from working on the project if the contractor is acting as a paid consultant that helps develop plans and specifications for the project. Here, contractors that provide bid estimates are not paid consultants because they do not charge for their bid estimates. Nor do the contractors develop any plans or specifications for the project because the design and specifications are set by statute. If a LEA is required to have three bids on a project, it can obtain those bids prior to applying for the grant. A LEA would not need to wait until approval of an application to select a winning bid and enter into a contract. A LEA that executed a contract for work prior to submitting the application would simply include a grant approval contingency in the contract.

# D. The AB 841 Incentive Program Is Not Applicable to Systems that Are Being Replaced; It Is Applicable to Systems That Need Replacement, But Are Still Being Relied Upon to Provide Adequate Ventilation

Several commenters recommend that the Commission consider alternate requirements for HVAC systems past its useful life or already slated for replacement. If a HVAC system is scheduled for replacement, then the system would not benefit from the assessment and maintenance activities funded under this program. However, if a system needs replacement but is still relied upon to provide ventilation in the school, then this program is applicable because AB 841's requirements are designed to ensure that the systems being relied upon are run to the best of their ability. Therefore, the latter should be excluded from grant funding, while the former should be included.

<sup>&</sup>lt;sup>6</sup> Davis v. Fresno Unified School Dist. (2015) 237 Cal.App.4th 261, 297-99. 4003-066j

We recommend the following modification to the Revised Staff Draft Guidelines to clarify that HVAC systems which need replacement but are not yet scheduled for immediate replacement are covered under this program:

The assessment is intended for Heating, Ventilation, and Air Conditioning (HVAC) units that are part of the ventilation system currently serving schools. Units scheduled for immediate replacement would not require or benefit from an assessment. Units that need replacement but are not yet scheduled for replacement and will continue to be relied upon to provide ventilation shall have an assessment performed. The application and HVAC Verification Report shall identify all HVAC units on the site. HVAC units that will be excluded from the assessment, along with the justification for not performing an assessment, must be documented within the application and in the final HVAC Verification Report.

# E. The Commission Does Not Have Authority to Alter the Workforce Standards

Some commenters suggest that the Commission should expand the scope of qualifications needed to perform program activities. While AB 841 authorizes the Commission to amend some program requirements, the statute expressly prohibits any changes to workforce standards. Specifically, Section 1614(d) of the Public Utilities Code states: "Other than workforce qualification requirements, the technical and reporting requirements of the SRVEVR Program ... may be amended by the Energy Commission."

AB 841 clearly identifies the qualifications needed to perform program activities. Section 1620(h) defines a qualified testing personnel as either an HVAC acceptance technician certified to complete certain forms by a Commission-approved Acceptance Test Technician Provider or a certified TAB technician. Section 1620(g) defines a qualified adjusting personal as either a certified testing, adjusting, and balancing (TAB) technician or a skilled and trained workforce under the supervision of a TAB technician.<sup>8</sup> Finally, Section 1620(a) defines a certified TAB technician as

<sup>&</sup>lt;sup>7</sup> Public Utilities Code § 1614(d) (emphasis added).

<sup>8</sup> Id. § 1620(g).

<sup>4003-066</sup>j

a "technician certified to perform testing, adjusting, and balancing of HVAC systems by the Associated Air Balance Council (AABC), the National Environmental Balancing Bureau (NEBB), or the Testing, Adjusting and Balancing Bureau (TABB)."9

The workforce standards articulated in the Revised Staff Draft Guidelines accurately reflect the terms as they are defined in the statute. <sup>10</sup> No further changes or clarifications to the key words and terms are necessary.

#### F. Conclusion

JCEEP commends Commission staff for the excellent job they have done in developing these guidelines in a very short time frame. This is an important program for the health and safety of students and teachers and JCEEP's members look forward to contributing to its success.

Sincerely,

Thomas A. Enslow

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Andrew J. Graf

Counsel for the Joint Committee on Energy and Environmental Policy

TAE:AJG:ljl

Attachment

<sup>&</sup>lt;sup>9</sup> Id. § 1620(a).

<sup>&</sup>lt;sup>10</sup> Revised Staff Draft Guidelines at pp. 2-5. 4003-066j

# ATTACHMENT A

Recommended Clarification to Staff Draft Guidelines School Reopening Ventilation and Energy

Chapter 2: Project Requirements

#### A. HVAC Assessment and Maintenance Grants

An LEA may apply for a SRVEVR grant to fund HVAC assessment, completion of an HVAC Assessment Report, HVAC general maintenance, adjustment of ventilation rates, filter replacement, and carbon dioxide monitor installation, as well as limited contingency funding for repairs, upgrades, or replacements necessary to make the system functional or more energy efficient.

Grant applications must specify the details of each site and provide contractor estimates for costs specific to each site. Awards will be made based on contractor estimates. Additional details on application requirements are provided in Chapter 3.

Pursuant to PUC Section 1623 and these guidelines, system assessment and maintenance must follow a prescriptive process and meet certain requirements as specified. An LEA receiving a SRVEVR grant must ensure that Qualified Personnel or Licensed Professionals, as required below and defined in Table 1, perform all required project work. Additionally, the results and findings from assessments must be recorded in the HVAC Assessment Report as described in this chapter.

The contractor estimate shall be the primary substance of the application thus reducing the need for further consultation. A contractor estimate, for the HVAC Assessment and Maintenance shall provide a detailed site-specific budget, timeline, and accurate description of the following tasks:

- Assessments and general maintenance as designated in Section B HVAC Assessment and Maintenance Requirements.
- <u>Carbon Dioxide monitor installation or replacement as designated in Section C Carbon Dioxide Monitoring.</u>
- HVAC Assessment reports as designated in Section D HVAC Assessment Report.
- Review of HVAC Assessment Report as designated in Section D HVAC Assessment Report.
- HVAC Verification Report as designated in Section E HVAC Verification Report.

The HVAC Assessment and Maintenance Grants shall include an additional 20 percent of the requested amount for repairs, upgrades, or replacements necessary to make the HVAC systems functional or more energy efficient. Repairs, upgrades, or replacements beyond the 20 percent shall be noted in the HVAC Assessment Report and the HVAC Verification Report. Grants for work in excess of the 20 percent contingency will be referred to as HVAC Upgrade and Repair Grants and may be addressed in future editions of the guidelines.

#### B. HVAC Assessment and Maintenance Requirements

#### 1. Filtration

The LEA receiving a SRVEVR grant shall install filtration with a minimum efficiency reporting value (MERV) of 13 or better in the HVAC system where feasible. While not all systems can operate with a MERV 13, the highest MERV filtration shall installed without adversely impacting equipment.

a. Qualified Testing Personnel shall <u>test review</u> 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. The expected cost of the filters shall be included in the HVAC Assessment and Maintenance Grant estimate. Adjustments or repairs to increase fan capacity shall be limited to the 20 percent contingency. Required adjustments or repairs beyond the 20 percent contingency shall be considered for future HVAC Upgrade and Repair Grants.

- b. 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. Repairs and replacements shall be limited to the 20 percent contingency. Required Repairs beyond the 20 percent contingency shall be considered for future HVAC Upgrade and Repair Grants.
- c. 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 (https://energycodeace.com/NonresidentialForms/2019).
  - 1. Economizer dampers and controls that are not properly functioning shall be repaired by a Skilled and Trained Workforce. Repairs shall be limited to the 20 percent contingency. Required Repairs beyond the 20 percent contingency shall be considered for future HVAC Upgrade and Repair Grants.
- d. <u>Deficiencies not repaired with the 20 percent contingency and r</u>Recommendations for additional maintenance, replacement, or upgrades to the above shall be recorded in the HVAC Assessment Report required under PUC Section 1626 and these guidelines.

#### 2. Ventilation

After completing the filtration requirements described above, a Qualified Testing Personnel shall verify the ventilation rates in the 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 assessment shall include all of the following:

- a. 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.
- b. Measurement of outside air under Section B of CEC form CEC-NRCA-MCH-02-A—Outdoor Air Acceptance (https://energycodeace.com/NonresidentialForms/2019) and verification of whether the system provides the minimum outside air ventilation rates calculated in subparagraph a) directly above.
- c. 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 <u>measured read</u> values and deficiencies. If the

- original system design values are not available, document available information and note unavailability of system design values in the assessment report.
- d. Verification that design building/space pressure is achieved. of building pressure relative to the outdoors to ensure positive pressure differential and ensure the building is not over-pressurized.
- e. If applicable, verify the drive assembly condition.
- f. Verification of coil velocities and coil and unit discharge air temperatures required to maintain desired indoor conditions and avoid moisture carryover from cooling coils.
- g. Verification that separation between outdoor air intakes and exhaust discharge outlets meet requirements of the California Building Code, including Section 120.1.
- h. Confirmation that the air-handling unit is bringing in outdoor air and removing exhaust air as intended by the system design.
- i. Measurement of all exhaust air volume for exhaust fans, including restrooms. Document any discrepancies from system design.
- j. If the system does not meet the minimum ventilation rate requirements set forth in Table 120.1-A, the system shall be adjusted to the highest minimum ventilation allowable without adversely impacting equipment performance and building indoor environmental quality. In their review of the HVAC Assessment Report a Licensed Professional or Qualified Adjusting Personnel, as defined in Table 1, shall 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 the system does not meet the minimum ventilation rate for the expected occupancy, a Licensed Professional shall clarify the actual ventilation rate and the occupancy it should serve.
  - 1. If additional ventilation can be provided, a Qualified Adjusting Personnel must adjust ventilation rates to meet the minimum ventilation rate requirements set forth in Table 120.1-A to the extent feasible. After the adjustment, the measurement and verifications required by b), d), and e), directly above must be repeated. Adjustment of the ventilation rates to meet the minimum ventilation rate requirements with existing equipment shall be included in the HVAC Assessment and Maintenance Grant estimate.
  - 2.If minimum ventilation rate requirements set forth in Table 120.1-A cannot be met, this deficiency shall be reported in the HVAC Assessment Report, the HVAC Verification Report (outlined in Section E below), and addressed by a Licensed Professional as required by this chapter.

#### 3. Demand Control Ventilation

- a. If a demand control ventilation is installed, it must be adjusted to a carbon dioxide set point of 800 ppm or less and tested by Qualified Testing Personnel pursuant to Section B of CEC-NRCA-MCH-06-A-Demand Control Ventilation Systems Acceptance (https://energycodeace.com/NonresidentialForms/2019).
  - 1. If the demand control ventilation system does not maintain average daily maximum carbon dioxide levels below 1,100 ppm, it must 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.
- 2. When disabling a demand control ventilation system, the system must 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.
- b. Recommendations for additional maintenance, replacement, or upgrades for the demand control ventilation <u>that cannot be completed with the 20 percent contingency</u> shall be recorded in the HVAC Assessment Report, described in Section D.

#### 4. Coil Condition

- a. A Qualified Testing Personnel or a Skilled and Trained Workforce shall verify:
  - 1. Coil condition.
  - 2. Condensate drainage.
  - 3. Cooling coil air temperature differentials (entering and leaving dry bulb).
  - 4. Heat exchanger operation.

#### 5. Drive assembly.

b. If repairs, replacement, or upgrades are necessary that cannot be completed with the 20 percent contingency these deficiencies shall be reported in the HVAC Assessment Report and the HVAC Verification Report and addressed by the Licensed Professional pursuant to PUC Sections 1626–1627, as described in Section D.

#### 5. Additional Requirements

- a. A Qualified Testing or Adjusting Personnel shall review control sequences to verify systems will maintain intended ventilation, temperature, and humidity conditions during school operation.
  - 1. 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. Additional information can be found on ASHRAE's webpage for Building Readiness (<a href="https://www.ashrae.org/technical-resources/building-readiness">https://www.ashrae.org/technical-resources/building-readiness</a>)
  - 2. 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. Additional information can be found on ASHRAE's webpage for Reopening of Schools and Universities (<a href="https://www.ashrae.org/technical-resources/reopening-of-schools-and-universities">https://www.ashrae.org/technical-resources/reopening-of-schools-and-universities</a>).
  - 3. 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.

- b. 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 <u>intent and cannot be repaired with the 20 percent contingency</u>, this information will be included in the HVAC Assessment Report prepared pursuant to PUC Section 1626, and described in Section D, which will be provided to a Licensed Professional for determination of appropriate corrective measures pursuant to PUC Section 1626. Repairs, upgrades, or replacements shall be performed by a Skilled and Trained Workforce.
- c. Requirements for filtration levels, ventilation rates, and ventilation schedules may be amended by the CEC based on the latest COVID-19 or other applicable guidance.

#### 6. Carbon Dioxide Monitoring

#### a. Installation

To ensure proper ventilation is maintained throughout the school year, all classrooms in schools receiving a SRVEVR grant shall be equipped with a carbon dioxide monitor that meets all the following. The cost of the monitor, installation, and initial adjustment shall be included in the HVAC Assessment and Maintenance Grant estimate.

- 1. The monitor is hard-wired or plugged-in and mounted to the wall between three and six feet above the floor and at least five feet away from the door and operable windows.
- 2. The monitor displays the carbon dioxide readings to the teacher through a display on the device or other means such as a web-based application or cellular phone application.
- 3. The monitor provides 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.
- 4. The monitor maintains a record of previous data that includes at least the maximum carbon dioxide concentration measured.
- 5. The monitor has a range of 400 ppm to 2,000 ppm or greater.
- 6. The monitor is certified by the manufacturer to be accurate within 75 ppm at 1,000 ppm carbon dioxide concentration and is certified by the manufacturer to require calibration no more frequently than once every five years.

### b. Continued Monitoring of Classroom Carbon Dioxide Level

If a classroom carbon dioxide concentration exceeds 1,100 ppm more than once a week as observed by the teacher or the facility's staff, the classroom ventilation rates shall be adjusted by Qualified Testing or Adjusting Personnel, as defined in Table 1, to ensure that peak carbon dioxide concentrations in the classroom remain below the maximum allowable carbon dioxide ppm setpoint. Verification of the installation of carbon dioxide monitors in all classrooms shall be included in the HVAC Assessment Report, described below. The requirement for future adjustments by a Qualified Testing or Adjusting Personnel shall not be included in the HVAC Assessment and Maintenance Grant estimate. The LEA is responsible for continued monitoring.