

*Comment Received From: Scott Wayland, P.E.*  
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**SRVEVR Draft Guideline - Comments - Wayland 2021-005-04**

*Additional submitted attachment is included below.*

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**California Energy Commission**  
**1516 Ninth Street**  
**Sacramento, CA 95814**

**Docket #: 20-RENEW-01**  
**Project Title: School Energy Efficiency Stimulus Program**

Dear CEC Commissioners and Staff,

Thank you for the opportunity to support this program that implements AB 841. I would like to submit the following comments and questions regarding the School Reopening Ventilation and Energy Efficiency Verification and Repair (SRVEVR) Program Revised Staff Draft Guidelines:

1. The Revised Staff Draft Guideline is missing critical program milestone dates. When will the Program indicate dates for phases that will support LEAs that need to add provisions for ventilation and filtration where there is none existing, or have HVAC systems that cannot meet AB841 goals requiring replacement? When will the other phases start?
2. AB 841 edits PUC 740 to include Article 2, section 1613, which states that the SRVEVR Program shall be 'third-party' per CPUC Decision 16-08-019. Question: how is the Program meeting this requirement?
3. AB 841 makes the following statements regarding Licensed Professionals and the Program Assessment process:
  - **1621. (c) (2)** *If a licensed professional identifies cost-effective energy efficiency upgrades or repairs that would exceed the additional 20 percent awarded, a local educational agency may apply for additional funding pursuant to this article for the cost-effective energy efficiency upgrades or repairs.*
  - **1623. (b) (2)** *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 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 additional ventilation can be provided, a qualified adjusting personnel shall 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 in subparagraphs (B), (D), and (E) of paragraph (1) shall be repeated. If minimum ventilation rate requirements set forth in Table 120.1-A cannot be met, this deficiency shall be reported in the assessment report and the verification report, and addressed by a licensed professional as required pursuant to Sections 1626 and 1627.*
  - **1623 (d)** *A qualified testing personnel or a skilled and trained workforce shall verify coil condition, condensate drainage, cooling coil air temperature differentials (entering and leaving*

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*dry bulb), heat exchanger operation, and drive assembly. If repairs, replacement, or upgrades are necessary, these deficiencies shall be reported in the assessment report and the verification report, and addressed by the licensed professional pursuant to Sections 1626 and 1627.*

Question: why does the Program Draft Guidelines exclude consultant fees when clearly the Legislation requires that a Licensed Professional be an integral part of the assessment team?

If it is the intent of the legislation that the Licensed Engineer be engaged by the qualifying provider, then the guideline should say that. But why shouldn't a LEA be able to rely on their Architect and Mechanical Engineer directly in determining which systems can meet the AB 841 goals and which ones can't?

4. **Frugal and effective use of Program Funds; Scope of Assessment Reports.** The SRVEVR Guidelines indicate that a LEA's application shall fully meet the Project Requirements to be deemed eligible. The criteria for the HVAC Assessment Reports require that *full* Test and Balancing (TAB) work be performed on every system, zone, and the envelope.

During the Assessment phase, a LEA's contractor and engineering team could make the necessary determinations regarding the HVAC system's viability to meet the program goals with less effort than a *full* TAB analysis. For instance, consider a single zone packaged (or split) HVAC system that serves one classroom. A TAB agent could perform a *targeted* set of measurements during the assessment phase, sufficient for the evaluation. Such an assessment could take less than 1/3 of the time (and resources) that a *full* TAB scope would take. And, that TAB report would still include enough data for the engineer to determine if the program goals can be met with cost effective alterations vs requiring a full unit replacement.

During the Verification Phase of the project, the LEAs could then engage a TAB agent to perform *full* TAB work. If new deficiencies are discovered during that time (duct distribution losses, building pressurization issues), the LEA and their contractor could address those issues at that time.

**Suggestion: The Program Administrator (PA) should accept Assessment Phase applications from LEAs for SRVEVR Grants that include Assessment Reports that may not have *full* TAB reports for every system and allow the LEAs to use the program resources effectively.**

5. **Emphasize upgrading existing classrooms without mechanical ventilation.** There are a significant number of classrooms in the state that are fitted with operable windows for 'natural' ventilation only. These classrooms sometimes have "unit heaters", or older hydronic heating systems. They often do not have mechanical cooling. **This program should support the installation of new Mechanical Ventilation where only natural ventilation exists, with an emphasis.** New Mechanical Ventilation can be a component of new mechanical cooling, or via an Energy Recovery Ventilator (ERV) type appliance. These retrofit ventilation systems shall also include MERV 13 media inclusion, per the Program goals. The revised staff guideline suggests that the program will support a school leaving natural ventilation with no filtration as-is. This must be rectified in the program language so it's clear that the goal is to install mechanical ventilation with filtration.
6. Assessment of deficient equipment, eligibility. If a HVAC system has reached its remaining useful life (RUL) per DEER, and it is deemed ineffective with respect to ventilation, filtration upgradeability, overall performance of air delivery and temperature control, **is this system eligible for replacement under the SRVEVR program?**

7. Consideration of MERV 13 improvements. Many existing HVAC systems do not have adequate static pressure to accommodate a filtration media upgrade to MERV 13 because the filter sections in those systems have high velocity airflow approach speeds. This is especially true for 'residential style' upright furnace-type air handling units, often utilized in classroom installations. **Question: should the Program emphasize or suggest that LEAs and their contractor and engineering team(s) consider alternative locations for MERV 13 filter placement where the airflow velocity low enough to not adversely affect system performance and air delivery?** Example: a 4" pleated MERV 13 filter, located outside the AHU, has a lower pressure drop due to reduced face velocity (100 fpm vs 400 fpm at the unit).
8. Consider incorporating relevant aspects to **ASHRAE's new Building Readiness Guideline:** <https://www.ashrae.org/file%20library/technical%20resources/covid-19/ashrae-building-readiness.pdf>  
Inclusion of the measures in this ASHRAE Guideline could be Grant-eligible but not mandatory measures for the Program.
9. Grant funds should be provided to the LEAs prior to completion so they can reimburse the agents performing the HVAC assessments, adjustments, and replacements. LEAs cannot accomplish the program goals with 50% or less up front.

Thank you for considering these points,

Scott Wayland, P.E.

