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Submitted via Electronic Docket

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: **JCEEP, SMART Western States Council, and CAL SMACNA's Joint Comments on the CalSHAPE Ventilation Program Draft Guidelines**

Dear Commissioners and Staff:

We are writing on behalf of the Joint Committee on Energy and Environmental Policy ("JCEEP"), the Western States Council of Sheet Metal Workers, and the California Association of Sheet Metal and Air Conditioning Contractors, National Association ("CAL SMACNA") to comment on the Draft Guidelines for the California Schools Healthy Air, Plumbing, and Efficiency ("CalSHAPE") Ventilation Program ("Draft Ventilation Guidelines").[1]

All three of these organizations greatly appreciate the hard work of Commission staff to create an equitable program consistent with AB 841 based on the limited information they had on potential project costs. Overall, we support the Draft Ventilation Guidelines; however, we are concerned that the proposed maximum grant award for the HVAC Assessment and Maintenance Pathway is unrealistic, inequitable and will exclude all but the smallest schools from this

[1] California Energy Commission, Draft Commission Guidelines: California Schools Healthy Air, Plumbing, and Efficiency Ventilation Program (Apr. 2021) (hereinafter "Draft Ventilation Guidelines"), *available at* https://efiling.energy.ca.gov/GetDocument.aspx?tn=238045&DocumentContentId=71296.

program. Below, we offer several modifications to the Draft Ventilation Guidelines and seek further clarification regarding the Commission's interpretation of several provisions.

A. Establishing a $40,000 Maximum Award for the HVAC Assessment and Maintenance Pathway Will Create an Ineffective Ventilation Program

The Draft Ventilation Guidelines state that grant awards will be made based on contractor estimates not to exceed the maximum award amount for each Pathway, as well as, the purchase and installation of filters and carbon dioxide monitors.[2] The Guidelines establish a maximum grant for the HVAC Assessment and Maintenance Pathway of $40,000 for assessment (including adjustment of ventilation rates and controls, basic maintenance and assessment reports with recommendations for further upgrades, repairs or replacements if necessary), $500 per CO_2 monitor installation, and $75 per filter replacement.[3] As discussed below, these maximum amounts are grossly inadequate and will result in a failed program that will exclude the vast majority of schools.

We appreciate staff's work in attempting to come up with a workable maximum when they did not have the benefit of any hard data on project costs. SMACNA had attempted to obtain cost estimates earlier in the guideline development process, but there was simply not enough data available until the last couple of weeks to provide a meaningful assessment of likely costs. For that reason, SMACNA had cautioned against setting a maximum award amount. The good news is that contractors and schools are starting to move forward in bidding this work, which now provides us actual cost information on which some greater cost certainty can be assessed. The bad news is that this data confirms that the proposed maximum grant amounts are well below what is needed.

Since the end of the last public comment period, SMACNA has been able to obtain information from its member contractors on prices for 28 individual AB 841 ventilation projects. This is the first time that SMACNA has been able to evaluate hard data on the likely costs of this program. A copy of this data set is attached as Exhibit A to this letter.

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[2] *Id*. at p. 13, 26.
[3] *Id*. at p. 28.

This data highlights several serious concerns with the maximum threshold proposed in the current version of the draft Guidelines. First, only 4 out of the 28 projects (14%) had an assessment cost under the proposed $40,000 maximum. These consisted of one very small elementary school and three small continuation or specialty schools. Sixteen out of 17 elementary schools would not be able to complete an assessment with this maximum and not a single middle school or high school would be able to complete an assessment with this maximum amount. It is unclear on what basis the $40,000 maximum was chosen, but it does not reflect the actual costs of assessment. Assessment costs under the proposed Guidelines include not just assessment, but also necessary ventilation and control adjustments and basic maintenance to ensure systems are providing adequate ventilation and are running efficiently. For most schools, this should be sufficient to ensure proper ventilation without major replacements or repairs.

Awards that do not allow complete assessments will perpetuate the problem of poor ventilation in schools rather than solve it. Complete assessments are necessary to identify and document systems that schools assume are operating correctly, but in fact are unable to provide adequate ventilation to students and teachers without major repair or replacement. Such documentation not only identifies critical health and safety issues in schools, it also provides the documentation necessary to support seeking additional funds to correct those major problems. These additional funds may include subsequent AB 841 funds, federal Elementary and Secondary School Emergency Relief funds or future school bond measures.

If a $40,000 maximum assessment amount is adopted, it is not hyperbole to say that this program will be a failure. The only schools that could complete an adequate assessment would be the very smallest schools in a district. Larger schools, which are more likely to have classes with large numbers of students, are even more likely to have serious ventilation issues than smaller schools. If a school knows that it will not receive enough funding to complete a meaningful assessment, it is unlikely to participate in this program at all. Enacting a program that excludes over 85% of all schools based solely on size is inequitable and inconsistent with the intent of AB 841.

B. Recommended Modifications to the Maximum Grant Award for the HVAC Assessment and Maintenance Pathway

There is a solution, however, that the new data SMACNA has obtained on actual project costs provides. Using this broader data set, SMACNA was able to identify a rough assessment cost estimate formula based on the number of HVAC units in a school. For most projects, a base assessment cost of $20,000 plus an additional $1,500 per unit would provide a reasonable maximum assessment cost amount.

However, even this maximum amount would inequitably exclude several schools even in the attached data set. Conversations with contractors have confirmed that the variation in the price per unit can vary widely depending on the type of facilities and equipment. This is particularly the case in some newer, more complex systems that use a smaller number of very large units to serve an unusually high number of classrooms or in high schools with more complex systems (e.g., variable air volume ("VAV") systems) serving laboratories, large auditoriums and gymnasiums or other larger or more complex systems that may require more work per HVAC unit. Any maximum based on average costs would require some process to address schools with unusual circumstances that would require a greater amount in order to complete an adequate and meaningful assessment and the necessary ventilation and control adjustments and basic maintenance provided as part of the assessment process.

We strongly urge the Commission to provide an appeal process for schools whose systems would not fit under a $20,000 plus $1,500 per unit formula. The simplest process for an appeal would be to require such projects to be supported by at least three bids (this would be in addition to any competitive bidding requirements that would independently apply under applicable rules governing that school's contracting procedures).

The data also found that the proposed maximum grant per CO_2 monitor was does not represent the actual average cost of purchasing and installing a CO_2 monitor. The data showed that the average installed cost per CO_2 monitor is around $750 per monitor. This average cost is consistent with the data provided to the Commission by the U.C. Davis Western Cooling Efficiency Center. The average cost, of course, means that many projects would exceed that cost. This would

particularly be the case if the CO_2 monitor was connected to a building automation system. The current proposed maximum $500 grant per CO_2 monitor is simply insufficient to cover the cost and installation of the monitors. We strongly urge the Commission to increase the grant per CO_2 monitor to $750.

The data found that the average cost per each replaced filter was $50 to $70, suggesting that proposed maximum reimbursement of $70 per each filter is reasonable and adequate.

In sum, the proposed $40,000 assessment plus $500 cost per CO_2 monitor maximum amounts are not even close to adequate and will result in a failed program. Based on the best available data, a reasonable and workable maximum amount would be: $20,000 + $1,500 per unit + $750 per CO_2 monitor + $75 per filter. Utilizing this method will allow the Commission to scale the grant to fit the needs of each school, while also maximizing the number of grants awarded and ensure there is enough funding leftover for the second phase of the program.

C. AB 841 Mandates that the Commission Include the Approved Carbon Dioxide Monitor Budget When Calculating the 20 Percent Contingency Award

The Draft Ventilation Guidelines propose calculating the contingency award by taking 20 percent of the total approved budgets for (1) HVAC Assessment and Maintenance, (2) completion of the HVAC Assessment Report, and (3) the purchase and installation of filter replacements.[4] This provision excludes the cost of purchasing and installing carbon dioxide monitors from the base amount on which the 20 percent contingency fund is calculated. AB 841 mandates that the contingency fund be "20 percent of the requested amount."[5] Because the carbon dioxide monitors are part of the "requested amount," they are required by statute to be included in the calculation of the 20 percent contingency fund.

This is important, because the contingency award is necessary to allow the performance of repairs necessary to ensure a system is functioning safely and efficiently without requiring funds from other sources, which could delay necessary repairs by months or years. Under the Guidelines, expenditures of the contingency amount are limited to work identified as necessary by the design professional and

[4] Draft Ventilation Guidelines at p. 26.
[5] Pub. Utilities Code § 1621(c)(1).

must be documented. Any contingency amount not needed must be returned. To comply with AB 841, the Guidelines must be revised to include the carbon dioxide monitor budget in the calculation of the contingency award.

D. The Commission Should Clarify How It Will Handle Applications that Seek to Utilize Multiple Pathways

The Draft Ventilation Guidelines establish three separate grant Pathways: (1) the HVAC Assessment and Maintenance Pathway, (2) the Scheduled for Replacement Pathway, or (3) the Limited or No Mechanical Ventilation Pathway. The first pathway applies to a site that has at least one HVAC system that is not scheduled for replacement within two years of the application submittal date.[6] The second pathway applies to a site where all HVAC systems at the site are scheduled for replacement within the two years of the application submittal date.[7] The third pathway applies to a site that does not have an HVAC system (defined as any air-handling units, rooftop units, and unitary and single-zone equipment in the HVAC. system or systems of a site).[8]

While the second pathway clearly states that all HVAC systems on site must be scheduled for replacement within two years of the application submittal date, LEAs may want to apply a different pathway for each system. A school with multiple units is not likely to have all systems scheduled for replacement within two years and would not want to proceed with all HVAC Assessment and Maintenance activities for systems that are scheduled for replacement. Our reading of the Guidelines is that such schools would need to use the full HVAC Assessment and Maintenance Pathway. The Commission should clarify how it will handle applications from schools that may have a few HVAC units scheduled for replacement while the rest of the units will undergo the full HVAC Assessment and Maintenance Pathway.

[6] Draft Ventilation Guidelines at p. 12.
[7] *Ibid.*
[8] *Ibid.*

E. The Commission Has the Legal Authority to Make Changes to the Draft Ventilation Guidelines Prior to the June 6, 2021 Business Meeting

The Draft Ventilation Guidelines are agendized for the June 6, 2021 business meeting. The Commission is not prohibited from making any changes to the Guidelines prior to the business meeting because the Administrative Procedure Act does not apply to the adoption of guidelines or regulations for this program.[9] Therefore, the Commission should make the recommended modifications and clarifications to the Guidelines prior to its approval.

F. If Adjustments Cannot Be Made Prior to the Upcoming Commission Meeting, We Recommend Approving the Proposed Guidelines on an Interim Basis for the First Quarter with Adjustments in the Second Quarter

All three of the above organizations wish to avoid further delay in commencement of this program. If the Commission is unable to make the recommended modifications and clarifications before the Commission's next business meeting, then we strongly urge the Commission instead consider the following alternative path:

> *Approve the program as-is next week with the additional provisions that: (a) the maximum amounts apply only to grants provided in the first quarter of the program and will be adjusted for the second quarter as hard data on actual program costs is assessed and that an appeal process for special circumstances may be adopted if deemed necessary; (b) applicants whose total program costs exceed the maximum amount have the option of either (i) accepting the maximum award in the first quarter and covering any additional costs with other funds or (ii) waiting to receive their grant until the second quarter of awards and being first in line for potentially a greater amount.*

Committing to re-evaluating the maximum amount and allowing LEAs to defer consideration of their application to the second quarter would produce three substantial benefits. First, it will allow the program to proceed on a more limited basis immediately. Second, it encourages LEAs to promptly submit applications because the Commission will continue to process applications on a first-come, first-

[9] Pub. Util. Code § 1614(b).

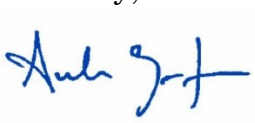
serve basis without punishing LEAs that elect to defer evaluation until the second quarter. Third, it generates the data necessary to determine whether the any adjustment to the maximum is appropriate by not discouraging larger schools from submitting applications at all.

G. Conclusion

We thank Commission staff for the excellent and difficult job they have done in developing these Guidelines in a very short time frame. However, new data demonstrates a critical need for further amendments to the Guidelines – if not now, by the second quarter of the program implementation.

Thank you for your consideration of these comments.

Sincerely,



Thomas A. Enslow
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EXHIBIT A

Exhibit A

Data From 28 AB 841 Ventilation Project bids from SMACNA Contractors

Quantity						
Unitary Under 7.5T	**Unitary Over 7.5T**	**Multizone/ AHU**	**CO2**	**Filters**	**Assessment**	School Type
39	1		$28,800	$ 2,600	$ 46,073	Elementary
38	1		$28,080	$ 2,535	$ 44,948	Elementary
22			$15,840	$ 1,430	$ 24,748	Continuation
49	1		$36,000	$ 3,250	$ 57,322	Elementary
46	1		$33,840	$ 3,055	$ 53,947	Elementary
2		2	$10,080	$ 910	$ 15,213	Elementary
22		5	$37,440	$ 3,380	$ 57,156	Elementary
43	1		$31,680	$ 2,860	$ 50,572	Elementary
38	3		$29,520	$ 2,665	$ 49,350	Elementary
45	1		$33,120	$ 2,990	$ 52,822	Elementary
40			$28,800	$ 2,600	$ 44,997	Elementary
43	1		$31,680	$ 2,860	$ 50,572	Elementary
62	6		$48,960	$ 4,420	$ 82,950	Middle School
40	1		$29,520	$ 2,665	$ 47,198	Elementary
45			$32,400	$ 2,925	$ 50,621	Elementary
34	2		$25,920	$ 2,340	$ 42,649	Elementary
21			$15,120	$ 1,365	$ 23,623	Continuation
168	2		$122,400	$ 11,050	$ 193,388	High School
64	2		$47,520	$ 4,290	$ 76,397	Middle School
50	25		$54,000	$ 4,875	$ 111,269	Middle School
42	2		$31,680	$ 2,860	$ 51,648	Elementary
104	4	1	$82,080	$ 7,410	$ 132,277	High School
66			$47,520	$ 4,290	$ 74,245	Elementary
37	1		$27,360	$ 2,470	$ 43,823	Elementary
24	1		$18,000	$ 1,625	$ 29,199	Other
35	10		$32,400	$ 2,925	$ 61,381	Middle School
61	6	14	$108,720	$ 9,815	$ 172,569	High School
107	1		$77,760	$ 7,020	$ 122,567	Middle School

Average Installed Cost per CO_2 monitor = $700 - $750

Average Installed Cost per Filter = $50 - $70

Average Assessment cost per Elementary School = $49,000

Average Assessment cost per Middle School = $91,000

Average Assessment cost per High School = $131,000