

LFC Requester:	Liu
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**AGENCY BILL ANALYSIS
2023 REGULAR SESSION**

WITHIN 24 HOURS OF BILL POSTING, EMAIL ANALYSIS TO:

LFC@NMLEGIS.GOV

and

DFA@STATE.NM.US

{Include the bill no. in the email subject line, e.g., HB2, and only attach one bill analysis and related documentation per email message}

SECTION I: GENERAL INFORMATION

{Indicate if analysis is on an original bill, amendment, substitute or a correction of a previous bill}

Check all that apply:
Original **Amendment** _____
Correction _____ **Substitute** _____

Date 2/21/2023
Bill No: HJM07

Sponsor: Block
Short Title: STUDY SCHOOL VENTILATION & AIR CONDITIONING

Agency Name and Code Number: New Mexico Public School Facilities Authority 940

SECTION II: FISCAL IMPACT

APPROPRIATION (dollars in thousands)

Appropriation		Recurring or Nonrecurring	Fund Affected
FY23	FY24		

(Parenthesis () Indicate Expenditure Decreases)

REVENUE (dollars in thousands)

Estimated Revenue			Recurring or Nonrecurring	Fund Affected
FY23	FY24	FY25		

(Parenthesis () Indicate Expenditure Decreases)

ESTIMATED ADDITIONAL OPERATING BUDGET IMPACT (dollars in thousands)

	FY23	FY24	FY25	3 Year Total Cost	Recurring or Nonrecurring	Fund Affected
Total						

(Parenthesis () Indicate Expenditure Decreases)

Duplicates/Conflicts with/Companion to/Relates to:
 Duplicates/Relates to Appropriation in the General Appropriation Act

SECTION III: NARRATIVE

BILL SUMMARY

Synopsis:

House Joint Memorial 7 (HJM7) details the issues regarding air quality and heating, ventilation and air conditioning (HVAC) systems in schools. The memorial details the need for the HVAC systems to be assessed by certified mechanical technicians to provide specific technical information, verification of system data, and actions needed to improve the systems. The memorial indicates that although school districts can use federal coronavirus relief funds or PSCOC systems-based funding, more study is needed to ensure access to funding to perform HVAC verification assessments, repairs, adjustments and replacements.

HJM7 requires that the Public School Capital Outlay Oversight Task Force (PSCOOTF) study public school HVAC system and recommend a sustainable funding mechanism for HVAC assessments, repairs, adjustments and replacements. The PSCOOTF is to work with the Public School Facilities Authority (PSFA), Public Education Department, Legislative Education Study Committee (LESC), and Legislative Finance Committee (LFC) to develop recommendations. The PSCOOTF shall report the recommendations to the LESL by January 16th, 2024.

FISCAL IMPLICATIONS

HJM7 does not require funding to accomplish the study required of the PSCOOTF; however, it does require the recommendation of a sustainable funding mechanism for school districts to accomplish HVAC assessments, repairs, adjustments and replacements. This could result in the state funding these HVAC projects.

The cost of a school HVAC ventilation assessment per school will depend on the size of the school. There are approximately 65,000,000 gross square feet (GSF) of existing public school buildings in New Mexico; this does not include district owned non-educational spaces and other types of facilities. Below are estimated costs and time to complete the ventilation assessments, to meet the criteria described in HB30, based on ranges of actual school sizes in New Mexico.

Estimated Potential Costs for Ventilation Verification Assessments for all NM Schools:

School Size (Gross Square Feet)	Number of Schools	Estimated Time for Assessment per School	Estimated Cost of Assessment per School	Total Estimated Cost Range
0 – 50,000 GSF	217	5-7 days	\$8,000 - \$15,000	\$2.1 M - \$3.8 M
50,001 – 100,000 GSF	367	8-14 days	\$15,000 - \$25,000	\$5.3 M - \$8.8 M

100,001 – 200,000 GSF	125	15-30 days	\$25,000 – \$40,000	\$3.1 M - \$5.0 M
200,001 -- larger GSF	50	30+ days	\$40,000 - \$70,000	\$2.0 M - \$3.5 M
Totals	759			\$12.4 M - \$21 M

Until the ventilation assessments are completed, it is not possible to know the number of HVAC systems or units that will need to be repaired, adjusted or replaced. However, based on PSFA’s knowledge of the condition of existing HVAC systems in schools, the total gross square feet requiring HVAC upgrades or replacements in New Mexico schools could reach up to 25% of school buildings in the state. It is important to note that PSFA’s data on schools’ building systems is limited to overall age and condition, as observed by PSFA assessors or reported by the school or district. Therefore, it is important to note; *PSFA does not assess HVAC units to the degree this bill requires or keep detailed inventory and data regarding each individual unit.*

HVAC upgrade and replacement projects on existing buildings are costly due to the complexity of the systems, high costs of individual units and components, and labor costs. The necessary scope for an HVAC replacement project must often include other associated building systems, such as fire alarm/suppression, electrical, roof, ceilings, thermal insulation, and the building envelope, to ensure the new HVAC system is functional and code compliant; these additional, associated building system replacements can be costly.

On average, the cost to replace or upgrade an HVAC system is between \$500 thousand and \$5 million per school facility, or an assumed range of cost of \$10 to \$20 million to replace the HVAC systems at 20 small to medium school facilities. Assuming a unit cost of \$45 to \$60 per square foot to replace an HVAC system, including associated and required work to complete projects, the total estimated cost to replace HVAC systems could range between \$731 million, to approximately \$1.95 billion.

Estimated Potential HVAC Replacement Costs to Meet Standards and Requirements:

Percentage of existing gross square feet that may require HVAC replacement	Total GSF that may require HVAC replacement	Estimated total cost to replace HVAC systems in schools (\$45 - \$60 per square foot)
25% of GSF in NM schools	16,250,000 GSF	\$731.3 M - \$975 M
50% of GSF in NM schools	32,500,000 GSF	\$1.5 B - \$1.95 B

Increased outdoor air ventilation rates may stress existing components in HVAC systems, such as fans and pumps. In order to draw more outdoor air into a building and flush it through occupied spaces, HVAC systems must have the capacity to temper the outdoor air temperature to meet the indoor air temperature requirements. For instance, a heating system that draws more cold outdoor air during the winter must have the capacity to heat that cold air before it is delivered to spaces within the building. This heating system would need to consume more natural gas, propane, or electricity to supply more heat to the elements of the system that cold air passes through to be warmed to at least 68 degrees. In order to raise or lower the temperature of heat exchanging elements, an HVAC system will consume more energy, resulting in increased heating and cooling costs. Utility costs are typically the second highest line item in district operational budgets, behind the cost for personnel salaries and benefits. To improve indoor air quality with increased fresh, outdoor air volumes, districts will need to be able to afford higher utility bills.

SIGNIFICANT ISSUES

HJM7 requires the PSCOOTF to conduct a study of public school HVAC systems and recommend a sustainable funding mechanism for the assessment, repair, adjustment and replacement of HVAC systems. This does not mandate that all public schools receive an HVAC assessment, which could result in the need to conduct corrective actions. In order for school districts to receive the verification assessments and implement corrective actions, a funding mechanism is needed to prevent a financial burden on New Mexico school districts.

Ventilation Verification Assessments:

To complete a ventilation verification assessment at a school site, a week to a month of field and office time would be required for the certified assessors and mechanical engineers, depending on the size of the school. With a limited workforce, it would be problematic to conduct the assessments as proposed for each school facility throughout the state in a timely manner. This endeavor would also be very costly to the district.

Corrective Actions (HVAC Projects):

Based on available, qualified engineering and construction labor to perform the corrective action work, PSFA estimates that no more than 40-60 HVAC replacement projects could be in-process concurrently throughout the state at the same time. If 25% of the school sites in NM (approximately 190 campuses) require HVAC replacement projects to comply with these requirements, only 40-60 projects might be initiated per year. Since most HVAC replacement projects require 1 to 2 years to complete the work, it may take 4 to 8 years to complete projects at 25% of the school facilities in NM.

Potentially, the urban and more financially well-situated school districts could more quickly mobilize and access the services of the limited workforce to perform the assessments and the corrective action work. This would potentially leave the other school districts, in rural areas far from urban centers, with limited to no access to the services required.

Further, the prohibited bidding practice of Section 10-16-13 NMSA 1978 would also affect the school districts' ability to obtain either the services for the assessments or the services for the corrective action work. This section prohibits a state agency or local government agency (such as school districts) in part from accepting a bid or proposal from a person who directly participated in the preparation of the specifications, on which the specific competitive bid or proposal was based. If the assessment prepared by a company is used in the development of the specifications for the corrective action work, that company is prohibited from bidding. This would further limit the availability of a qualified workforce to perform either the assessments or the corrective action work identified in the assessments. With an already limited workforce, many companies might potentially opt to perform the more lucrative work of repairing or replacing entire HVAC units, rather than performing the assessments.

PSCOC Funding:

Funding for HVAC assessments and the resulting corrective actions for the HVAC systems may put a strain on district's limited finances, particularly for small districts with limited bonding capacity or SB-9 funding. The school districts may not be able to fund these requirements and potential HVAC improvements without funding assistance from the state.

The ventilation verification assessments, maintenance and repairs of HVAC systems are not eligible for PSCOC funding. Districts may be able to apply for PSCOC funding, under the systems-based funding program, for the replacement of HVAC systems. If a district were to

apply for and receive PSCOC funding to complete the required HVAC projects, the rules as defined in Section 22-24-5 NMSA 1978 would apply, requiring adherence to the state / local match formula, in which a district is responsible for funding a percentage of the capital project. This would impact districts with higher local matches disproportionately to districts with lower local matches. Direct appropriation offsets would also apply to the projects, resulting in the district paying more than the local share; districts with high and unaffordable offsets would not be able to participate in PSCOC funding to accommodate the required corrective actions.

PERFORMANCE IMPLICATIONS

ADMINISTRATIVE IMPLICATIONS

CONFLICT, DUPLICATION, COMPANIONSHIP, RELATIONSHIP

HJM7 is related to House Bill 30. However, this memorial attempts to study the issue indicated in the PSFA FIR: HB30 does not provide a funding source or mechanism for either the mandated ventilation verification assessments or the corrective actions needed. Funding for the assessments and resulting maintenance, repairs, upgrades or replacement of the HVAC systems will put a strain on district's limited finances, particularly for small districts with limited bonding capacity or SB-9 funding. The school districts may not be able to fund these requirements and potential HVAC improvements without funding assistance from the state.

TECHNICAL ISSUES

OTHER SUBSTANTIVE ISSUES

ALTERNATIVES

WHAT WILL BE THE CONSEQUENCES OF NOT ENACTING THIS BILL

The PSCOOTF will not be required to study public school HVAC systems and recommend a sustainable funding mechanism for the HVAC assessments, repairs, adjustments, and replacements.

AMENDMENTS