



**ESTIMATED ADDITIONAL OPERATING BUDGET IMPACT (dollars in thousands)**

	<b>FY23</b>	<b>FY24</b>	<b>FY25</b>	<b>3 Year Total Cost</b>	<b>Recurring or Nonrecurring</b>	<b>Fund Affected</b>
<b>Total</b>						

(Parenthesis ( ) Indicate Expenditure Decreases)

**SECTION III: NARRATIVE**

**BILL SUMMARY**

House Bill 30 (HB30) creates a new section to the Public School Code, titled the “Public School Ventilation Improvement Act.”

HB30 provides defined terms for the Public School Ventilation Improvement Act to include, “certified assessor,” “certified technician,” “mechanical engineer,” “mechanical ventilation system,” “school district,” and “skilled and trained construction workforce.”

At Section 3, HB30 would place the responsibility with the New Mexico Public Education Department (PED) to require school districts to receive ventilation verification assessments of all mechanical units in the district and make corrective actions as needed.

The ventilation verification assessment of all mechanical ventilation systems in the district must be performed by a certified assessor or mechanical engineer. The assessment shall verify whether the existing system is operating in accordance with design parameters and meets the 2021 New Mexico Mechanical Code. The assessment shall include testing, measurement or verification of each mechanical unit’s overall condition, operation and maintenance. Appropriate corrective actions must be included in the report.

School districts would be required to make the appropriate corrective actions to the ventilation systems, as identified in the assessment report. Corrective actions include testing, adjusting and balancing existing systems and units, or repairs, upgrades or replacement if necessary or cost effective. The Bill further lists the types of corrective actions that may be identified in the ventilation verification assessment, and also proposes the circumstances in which portable filtration and air cleaners may be used in the existing heating, ventilation and air conditioning infrastructure.

HB30 proposes that school districts ensure that the corrective actions required by the ventilation verification assessment is performed by skilled and trained construction workforce in compliance with the Construction Industries Licensing Act (CID). The Bill further provides that PSFA shall work in consultation with PED and CID to ensure the assessments and construction required by the Act meet all standards and requirements.

Once the assessments and corrective actions are complete, school districts must submit a ventilation verification report the PED, to include specific information ensuring the work was done in compliance with the requirements of HB30. This includes documentation of the initial operating ventilation rate verifications, the corrective actions made (adjustments, repairs, upgrade or replacements), the final operating conditions of the mechanical systems and units, verification of carbon dioxide monitors, and verification that all work was completed by certified technicians or mechanical engineers.

HB30 further requires that school districts receive a ventilation verification assessment performed on all mechanical ventilation system at least on a five year cycle.

**FISCAL IMPLICATIONS**

If this bill is enacted, school districts will be required to conduct a ventilation verification assessment on all mechanical ventilation systems in the school district. 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
<b>Totals</b>	<b>759</b>			<b>\$12.4 M - \$21 M</b>

HB30 proposes that if necessary or cost effective, as determined by the ventilation verification assessment, HVAC systems shall be repaired, upgraded, or replaced. Until the ventilation assessments are completed, it is not possible to know the number of HVAC systems or units that will need to be replaced. However, based on PSFA’s knowledge of the condition of existing HVAC systems in schools, to comply with the standards and requirements in HB30, 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, 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 to comply with the new standards 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	<b>\$731.3 M - \$975 M</b>
50% of GSF in NM schools	32,500,000 GSF	<b>\$1.5 B - \$1.95 B</b>

New Mexico school districts have escalated efforts to improve indoor air quality in schools since the onset of the Covid-19 pandemic and the availability of federal Covid relief funding. In 2020, the Centers for Disease Control (CDC) and the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) recommended several goals related to HVAC systems and ventilation at schools; one of which was to improve filtration by installing more restrictive air filters to capture these particulates. In response to requirements set for by PED as part of the reentry plan, school districts attempted to purchase and install MERV 13 filters. When an existing HVAC system can be upgraded to accommodate more restrictive air filters, such as MERV 13 filters, districts struggled with delays in the delivery of the new filters, unpredictable variability in cost, and impractical requirements for bulk purchases from suppliers. MERV 13 filters cost three to five times more than the MERV 8 filters, the type of filter commonly used by schools. Further, these filters must be replaced on a quarterly basis, creating a continued operational expenditure.

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**

Ventilation Verification Assessments:

To complete a ventilation verification assessment at a school site, to comply with the requirements in HB30, 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.

HB30 further requires that school districts receive a ventilation verification assessment performed on all mechanical ventilation systems at least on a five year cycle. This would result in repetitive costs to the district. New Mexico school districts currently obtain Facility Master Plans on a five year cycle, which are used as a planning document to prioritize facility needs and capital improvements. This document includes assessments of the facilities and building systems,

and identifies needs for HVAC repairs, upgrades and replacements; however, not to the degree this bill requires.

#### 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.

#### Impact on wNMCI, Statewide Ranking, and Potential PSCOC Funding:

This Bill only requires the Public School Facilities Authority (PSFA) to work in consultation with PED and CID to ensure the assessments and construction resulting from this Bill meet all standards and requirements. The PSFA does not have any oversight over the 2021 New Mexico Mechanical Code, and would be unable to confirm the requirements are met. CID is the entity with oversight of the 2021 New Mexico Mechanical Code.

The Bill does not require coordination between school districts and the Public School Capital Outlay Council (PSCOC) or the PSFA, or acknowledge the potential consequences any HVAC replacement project may have related to the weighted New Mexico Condition Index (wNMCI) scores of school facilities, the statewide ranking, and the on-going Zuni lawsuit.

It is important to note that the underlying premise behind the Public School Capital Outlay Council (PSCOC) standards-based and system-based funding has been to prioritize awards based on facility condition and educational space deficiencies. In 2015, the Legislature established a building system repair, renovation or replacement initiative, intended to supplement the standards-based program (typically full or partial replacement of school facilities), targeting building systems projects that would extend the useful life of the existing buildings and helping to sustain the average statewide condition of K-12 schools. Both the standards-based and systems-based funding programs use the annual statewide ranking of all NM schools, developed

by PSFA, to prioritize schools for funding.

The Public School Facilities Authority develops the annual statewide ranking of all NM school facilities, based on the results of PSFA assessments that document the facility condition and adequacy of all school buildings statewide. Through these facility assessments, PSFA gathers and manages facility information for every school in the state and uses the information to generate the numerical score for each school that is the basis of the statewide ranking. The weighted New Mexico Condition Index (wNMCI) score calculates the ratio of potential costs to correct facility condition deficiencies and educational adequacy deficiencies at a school, to the potential cost to replace the school. If a school is determined to have an age or condition based deficiency of a particular system, the wNMCI score reflects the costs to correct the issue using assigned unit costs for each building system. The statewide ranking lists schools in order of the wNMCI scores, to prioritize schools with the most needs for potential state funding through PSCOC funding programs.

The HVAC capital improvement projects resulting from this bill would significantly impact the schools' wNMCI scores and positions within the statewide ranking; the extent to which is unpredictable. Correcting HVAC deficiencies is the most expensive assigned cost in the wNMCI calculation; therefore HVAC improvements result in the largest impact on the wNMCI score. Schools with higher wNMCI scores, particularly those that are eligible, or nearing eligibility, for PSCOC standards-based or systems-based awards may be impacted the most by potential HVAC improvements. Substantial improvements to the HVAC systems would result in significantly lower wNMCI scores and ranked positions, which would therefore reduce the schools' eligibility for future potential PSCOC funding.

Further, districts would need to notify PSFA when a HVAC upgrade or replacement project has been completed, to ensure the database is accurately representing the condition of school facilities. The PSCOC statewide ranking and prioritized funding may be destabilized if the data regarding the condition of school facilities and HVAC systems is not accurately maintained.

#### Impact on Charter Schools:

The Bill defines "school district" to include all charter schools, which would require that all district-chartered and state-chartered charter schools conduct ventilation verification assessments and to make the appropriate corrective actions identified in the ventilation assessment. Section 22-8B-4.2 (D) NMSA 1978 requires that the private owners leasing facilities to charter schools maintain the facilities to statewide adequacy standards at their own cost, the ventilation repairs and replacements are not part of the statewide adequacy standards. Therefore, the charter schools would be required to undertake the cost of the assessments and all corrective action at their own expense. This requirement would pose a significant financial burden on charter schools and create a violation of the New Mexico Constitution's anti-donation clause if the corrective action work is performed on a private facility.

#### HVAC Requirements:

The ASHRAE recommended target level for filtration in a public school is a MERV 13 or higher. On average, this will remove 75 percent of particles of 0.3 to 1.0  $\mu\text{m}$ , which can effectively remove viral particles in the air. However, since some existing HVAC systems are not compatible with the MERV 13 filters, it may be problematic to meet this requirement. Air introduced to a classroom must always come from a clean air source. Air introduced into a classroom from another occupied space must first pass through a MERV 13 or higher filter, or be subjected to a high-efficiency particular air (HEPA) filtration unit within the classroom. As a

result, installing MERV 13 filters can stress existing HVAC system components, and may void manufacturer warranties for primary HVAC system components. MERV 13 filters have long delivery times, and must be replaced on a quarterly basis. Existing systems may use more electricity to push the air through the more restrictive filters. Additionally, not all existing HVAC systems will accommodate MERV 13 filters; radiant heating systems do not include mechanical air ventilation and evaporative coolers may not accommodate MERV filters.

#### Funding:

HB30 does not provide a funding source or mechanism for either the ventilation verification assessments or the corrective actions needed, both of which are mandated by this Bill. 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.

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. Additionally, the ventilation verification assessments, maintenance and repairs of HVAC systems are not eligible for PSCOC funding.

The bill does not consider the additional funding necessary to complete a functional and code compliant HVAC project, i.e. the associated scope of work that often must be performed in conjunction to the HVAC replacement (roofing, ceiling work, fire alarm system, fire suppression, electrical upgrades, windows and door, building insulation, etc.). This additional scope can be costly. This will result in higher costs that the districts will have to fund.

#### Project Management:

The bill does not factor in the necessary project management support that is required for these complicated projects to have a successful outcome. HVAC repairs, upgrades and replacement projects vary in complexity and scope, requiring expertise in management throughout the design and installation processes. Many districts, especially small districts with limited staff and/or inexperienced project managers, struggle to successfully complete this type of complicated project without PSFA project management support.

Without the proper project management and funding for the additional necessary scope, the resulting HVAC systems installed at schools may be dysfunctional. This could lead to districts requesting assistance from PSFA in the future to properly repair or replace the newly funded and installed systems.

### **PERFORMANCE IMPLICATIONS**

PSFA is not a licensing agency; therefore, it is not the appropriate entity to ensure that all construction requirements and standards of the Act are met by the school districts.

Most New Mexico schools are cooled by evaporative cooling systems, many of which cannot

accommodate filters to meet a minimum efficiency reporting value (MERV) of at least 13, as required in the Bill. Increasing the volume of untampered outdoor air that must be treated by the HVAC system may increase the risk of damage to other building systems.

## **ADMINISTRATIVE IMPLICATIONS**

## **CONFLICT, DUPLICATION, COMPANIONSHIP, RELATIONSHIP**

### **TECHNICAL ISSUES**

HB30 calls for “skilled and trained construction workforce,” which does not guarantee licensed professionals to repair, upgrade or replace the HVAC systems. This could result in sub-par quality of work and dysfunctional systems.

Section 3, paragraph A indicates that the school districts are required to undertake these assessment for “all mechanical ventilation systems in the school district.” This does not specify schools or educational facilities, and could therefore include all non-educational facilities, such as district offices, maintenance facilities, bus barns, etc. This may need to be more clearly defined.

Section 3, paragraph E states, “upon completion of work, the school district shall submit a ventilation verification report to the department,” and further details the requirements of the ventilation verification report. Consider including PSFA as a recipient of this report in order to formally inform the Authority of the completed HVAC project and the scope of work.

## **OTHER SUBSTANTIVE ISSUES**

### **ALTERNATIVES**

### **WHAT WILL BE THE CONSEQUENCES OF NOT ENACTING THIS BILL**

The “Public School Ventilation Act,” will not be enacted.

## **AMENDMENTS**