

TO:	Senator Brian Campion, Chair of the Senate Committee on Education Representative Kathryn Webb, Chair of the House Committee on Education
FROM:	Daniel Reilly, Public Affairs Director, Efficiency Vermont Jody Lesko, Programs & Implementation Director, Efficiency Vermont
DATE:	March 15, 2021

RE: Report Pursuant to Act 120 of 2020, Sec. A.51

In 2020, the Legislature and Governor Scott allocated funds from the Federal Coronavirus Relief Funds (CRF) to the School Indoor Air Quality Grant Program (the Program). The funding was made available to Vermont K-12 schools to improve the heating, ventilation, and air conditioning (HVAC) systems in their buildings, in reference to COVID-19-specific guidelines from the U.S. Centers for Disease Control and Prevention (CDC) and the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE).

Efficiency Vermont was selected to administer the Program. Together with the Agency of Education, the Vermont Superintendents Association, the Vermont Independent Schools Association, and other stakeholders, Efficiency Vermont designed and implemented the program, resulting in indoor air quality projects at three out of every four schools across Vermont.

In accordance with Sec. A.51. (g) of Act 120, this constitutes a final report on the Program. However, we know the Legislature is considering additional funding for 2021 for this Program and would be excited to continue this important work and provide additional lessons learned if given the opportunity.

Program Overview

The process for schools to receive funding included:

- Submission of an intake form, found at <u>www.efficiencyvermont.com/schools</u>
- Access to comprehensive written technical guidance distilling national and state specifications for schools
- Consultation with an Energy Consultant at Efficiency Vermont to define project scope
- Identification of a contractor to complete the scope of work (Efficiency Vermont provided schools a list of contractors who self-identified to complete these projects, which can be viewed at https://www.efficiencyvermont.com/find-contractorretailer?provider=contractors&search=indoor-air-guality)
- Approval of the scope of work and completion of a Subgrant Agreement between Efficiency Vermont and the school, supervisory union, or district
- Completion of the scope of work and submission of invoices to Efficiency Vermont
- Payment of the invoices, within 30 days of receipt

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Funding was available for:

- HVAC improvements meeting ASHRAE and CDC COVID-19-specific guidelines for indoor air quality improvements (see sample measures below).
- All eligible project costs including, but not limited to, labor, equipment, and materials.

There was no cap on funding per school. However, every school participating in the program was eligible to receive an indoor air quality monitor and a minimum allocation of \$2,500 for eligible projects and equipment. Funds were allocated based on schools' existing HVAC conditions, geographic location, and size.

Sample Project Overview

While each school's experience was unique, these are the steps that many schools went through to complete projects in 2020.

Assessment

The school hired an HVAC professional to assess condition of the existing HVAC system and complete air flow testing throughout the building. This assessment identified opportunities for improvement.

Scope of work

Using the assessment, an HVAC contractor, facilities manager, and Efficiency Vermont engineer developed a scope of work that delivered the most impact within the constraints of time and resource availability. This included upgrading existing equipment, improving building controls, creating an isolation space, and installing new filters throughout the system.

Project completion

The school hired multiple specialized HVAC and controls contractors and tradespeople to implement the approved scope of work in phases as equipment was delivered and contractors were available. Verifying completion of approved scope, school submitted invoices to Efficiency Vermont for reimbursement.

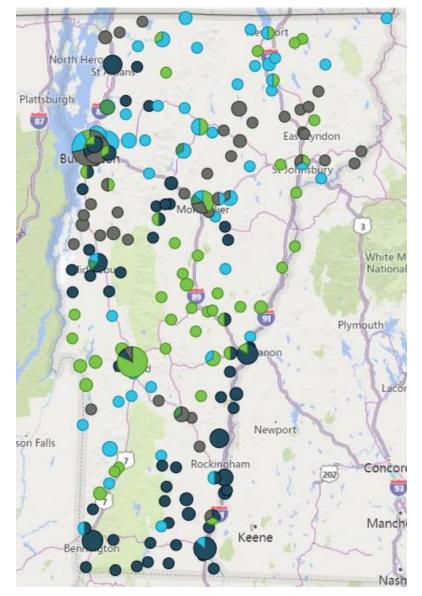
2020 Program Results

- 365 schools participated in the program (nearly 90% of all eligible schools in the state). 304 of those schools received funding for their HVAC project as well as at least one indoor air quality monitor. An additional seven schools received funding but no monitor, bringing the total number of schools that completed projects in 2020 to 311. An additional 54 schools received a monitor but no project funding. A full list of participating schools is found in the Appendix of this report, and a map of the geographic distribution of the schools is found below.
- Over 62,000 students and 6,500 teachers will now spend time in K-12 schools with improved HVAC systems.
- The projects encompassed nearly 13 million square feet of school space.
- Of the 311 schools that received direct funding, 40 schools previously had no ventilation systems. These schools can now bring fresh outside air into the building for the first time.



• The Program engaged 140 companies, including contracted engineers and tradespeople, to complete the projects at the 311 schools. Together, those companies employ hundreds of Vermonters.

Geographic Distribution



This map shows the zip code of the submitting entity, which may be the school or supervisory union. The dot size denotes the number of schools in that zip code. The dot color corresponds to the assigned staff at Efficiency Vermont and is unrelated to the details of the project.

Lessons Learned

There were several important features of the Program that enabled Efficiency Vermont and its partners to work quickly and efficiently and deliver funding to schools by the December 30th deadline. We would highly recommend these lessons be incorporated in any future work of a similar nature.



First, the Agency of Education allowed Efficiency Vermont a high degree of independence to make program decisions related to funding allocations and project scopes. Efficiency Vermont maintained close communication with the Agency of Education, the Vermont Superintendents Association, and the Vermont Independent Schools Association throughout the process, but this relative autonomy allowed the Efficiency Vermont team to make quick decisions, balancing available funding and school need.

Second, the Legislature decided that projects funded through this grant be excluded from the traditional bid requirements for schools. This decision saved valuable time and enabled schools to quickly procure resources necessary to complete larger projects. Efficiency Vermont balanced equity across schools while enabling quick decisions to move projects forward using our knowledge of standard pricing for these types of projects. Given our ongoing work in this area, Efficiency Vermont provided a level of scrutiny to bids and requested more information or changes when pricing fell outside of a typical range. We would recommend using this structure for future short-term programs of a similar nature.

Testimonials

Below are a selected set of testimonials sent to Efficiency Vermont from participating schools.

Andrew Lundeen, Director of Finance and Operations, Lamoille South Supervisory Union

"The support we received from grants and from Efficiency Vermont was extremely beneficial in both the short and long term... the process was collaborative and productive. We were able to improve indoor air quality in several school buildings through various upgrades and improvements and, if additional funds are made available, would be able to make additional HVAC improvements."

Bruce MacIntire, Director of Facilities, Addison Central Supervisory Union

"This is by far the easiest grant program we've ever participated in. The process was streamlined so we were able to get our vendors into our buildings and doing the work quickly. The biggest benefit is peace of mind for teachers and families. I can now show that rooms they or their children are in have proper ventilation and filtration. We still have six buildings that need more than we could tackle in last year's program. Ensuring proper ventilation in every room is the priority."

Bill Anton, Superintendent, Windham Central Supervisory Union

"Efficiency Vermont walked us through a somewhat complex process in a very uncomplex manner...Our district received financial support for tangible assets that will benefit our communities into the future. Along with those tangible assets, we received knowledge about doing ongoing maintenance to maintain the investments. Long story short: Efficiency Vermont deployed a plan...to benefit our students and communities for years to come."

Marc Brown, Facilities Manager, Kingdom East School District

"Because of the ventilation funding Kingdom East School District was able to either update or install new ventilation systems in 4 out of 7 of our schools to assure the facilities were safe to use. These projects were fast tracked but with the help of the staff at Efficiency VT we were able to complete all



4 projects on time and within budget. Without this funding and the excellent support of Efficiency VT we would not be having in person learning in some of our schools."



Appendix: Participating Schools

A one (¹) indicates that the school received both grant funds and a monitor. A two (²) indicates that the school only received an indoor air quality monitor. A three (³) indicates that the school only received grant funding

Public Schools

Addison Central School District

- Bridport Central School¹
- Bingham Memorial School¹
- Mary Hogan Elementary School¹
- Middlebury Union High School¹
- Middlebury Union Middle School¹
- Ripton Elementary School¹
- Salisbury Community School¹
- Shoreham Elementary School¹
- Weybridge Elementary School¹

Addison Northwest School District

- Vergennes Union Elementary School¹
- Addison Central School (Addison Wayfinder Experience)¹
- Vergennes Union High School¹
- Ferrisburgh Elementary¹

Barre Unified Union School District

- Spaulding High School²
- Central Vermont Career Center²
- Barre City Elementary & Middle School²
- Barre Town Elementary & Middle School²

Battenkill Valley Supervisory Union

- Fisher Elementary¹
- Arlington Memorial High School¹

Bennington-Rutland Supervisory Union

- Flood Brook School¹
- Dorset Elementary School¹
- Mettawee Community School¹
- Sunderland Elementary School¹
- Currier Memorial School²
- Manchester Elementary & Middle School²

Burlington School District

- Burlington High School¹
- Burlington Technical Center²
- C.P. Smith Elementary¹
- Champlain Elementary¹
- Edmunds Elementary & Middle School¹
- H.O. Wheeler School (Integrated Arts Academy)¹



- Ira Allen Early Education Center³
- J.J. Flynn Elementary¹
- Lyman C. Hunt Middle School¹
- Sustainability Academy¹

Caledonia Central Supervisory Union

- Danville School¹
- Twinfield Union School¹
- Cabot School¹
- Barnet School¹
- Peacham Elementary School²
- Walden School²

Central Vermont Supervisory Union

- Washington Village School¹
- Orange Center School¹
- Northfield Elementary²
- Northfield Middle-High School²
- Williamstown Elementary²
- WIlliamstown Middle-High School¹

Champlain Valley School District

- Williston Central School¹
- Allen Brook School¹
- Charlotte Central School¹
- Shelburne Community School¹
- Champlain Valley Union High School¹
- Hinesburg Community School¹

Colchester School District

- Colchester High School¹
- Colchester Middle School¹
- Mallets Bay School¹
- Porters Point School¹
- Union Memorial School¹

Cold Hollow Career Center¹

Essex North Supervisory Union

- Canaan Schools¹
- Canaan Career Center²

Essex/Westford School District

- Hiawatha Elementary School¹
- Summit Street School¹
- Thomas Fleming School¹
- Albert D. Lawton School²
- Essex High School & Center for Technology¹
- Essex Middle School¹



- Essex Elementary School¹
- Founders Memorial School¹
- Westford Elementary School³

Franklin Northeast Supervisory Union

- Bakersfield Elementary and Middle School¹
- Berkshire Elementary School²
- Enosburg Falls Middle & High School¹
- Richford Elementary School¹
- Richford Junior-Senior High School¹
- Montgomery Elementary School¹
- Sheldon Elementary¹
- Enosburg Falls Elementary School¹

Franklin West Supervisory Union

- Bellows Free Academy (Fairfax)¹
- Georgia Elementary and Middle School¹
- Fletcher Elementary School¹

Greater Rutland County Supervisory Union

- Rutland Town Elementary School¹
- West Rutland School¹
- Poultney Elementary¹
- Poultney High School¹
- Proctor Elementary¹
- Proctor Junior & Senior High School¹
- Wells Village School¹
- Allen Street Campus (Success School)³
- Stafford Technical Center¹
- Rutland High School¹
- Rutland Intermediate School¹
- Rutland Middle School¹
- Rutland Northwest Primary School¹
- Rutland Northeast Primary School¹
- Middletown Springs Elementary School²

Hartford School District

- Dothan Brook School¹
- Ottaquechee School¹
- Hartford Memorial Middle School¹
- Hartford High School¹
- White River School¹
- Hartford Area Career & Technology Center¹

Harwood Unified Union School District

- Harwood High School¹
- Harwood Union Middle School²
- Thatcher Brook Elementary School¹
- Crossett Brook Middle School¹



- Fayston Elementary School¹
- Warren Elementary School¹
- Waitsfield Elementary School¹
- Moretown Elementary School¹

Kingdom East School District

- Miller's Run High School¹
- Sutton School¹
- Burke Town School¹
- Concord School¹
- Lunenburg School¹
- Gilman School¹
- Lyndon School¹
- Newark School¹

Lamoille North Supervisory Union

- Cambridge Elementary School¹
- Waterford Elementary School¹
- Eden Central School²
- Green Mountain Technology & Career Center²
- Johnson Elementary School²
- Lamoille Union High School²
- Lamoille Union Middle School²
- Waterville Elementary School²

Lamoille South Unified Union School District

- Stowe High School¹
- Stowe Elementary School¹
- Elmore Elementary¹
- Peoples Academy¹
- Peoples Academy Middle School²
- Morristown Elementary School¹

Maple Run School District

- St. Albans City Elementary School¹
- St. Albans City School¹
- Fairfield Center School¹
- Bellows Free Academy (St. Albans)¹
- Collins Perley Sports Complex¹
- Northwest Career & Technical Center²

Mill River Unified Union School District

- Mill River Union High School¹
- Clarendon Elementary School¹
- Tinmouth Elementary School¹
- Wallingford Elementary School¹
- Shrewsbury Mountain School¹

Milton Town District



- Milton Middle & High School¹
- Milton Elementary School¹

Missisquoi Valley School District

- Franklin Central School¹
- Missisquoi Valley Union High School¹
- Swanton Elementary School¹
- Highgate Elementary¹

Montpelier Roxbury School District

- Montpelier High School¹
- Main Street Middle School¹
- Union Elementary School¹
- Roxbury School¹

Mount Abraham Unified School District

- Mt. Abraham Union High school¹
- Robinson School¹
- Beeman School¹
- Bristol Elementary¹
- Lincoln Elementary¹
- Monkton Elementary¹

Mount Mansfield Modified Union School District

- Browns River Middle School¹
- Mount Mansfield Union High School¹
- Jericho Elementary School¹
- Smilie Memorial Elementary School¹
- Underhill Central Elementary¹
- Brewster Pierce Elementary School²
- Camels Hump Middle School²
- Richmond Elementary School²

North Country Supervisory Union

- Charleston Elementary School¹
- Coventry Village School¹
- Newport City Elementary School¹
- Newport Town Elementary School¹
- Brighton Elementary School¹
- North Country Union High School¹
- North Country Union Junior School²
- Derby Elementary School²
- Jay/Westfield Joint School²
- Lowell Graded School²
- North Country Career Center²
- Troy Elementary School²

Orange East Supervisory Union

• Newbury Elementary School¹



- Thetford Elementary School¹
- Bradford Elementary School¹
- Blue Mountain Union School²
- Oxbow High School²
- Riverbend Career & Tech²
- Waits River Valley School²

Orange Southwest Supervisory Union

- Braintree Elementary¹
- Brookfield Elementary¹
- Randolph Elementary¹
- Randolph Union High School¹
- Randolph Technical Center²
- Randolph Area Vocational Educational Network²

Orleans Central Supervisory Union

- Barton Academy and Grade School¹
- Orleans Elementary School¹
- Irasburg Village Middle School¹
- Glover Community School¹
- Brownington Central Elementary School¹
- Albany Community School¹
- Lake Region Union High School¹

Orleans Southwest Supervisory Union

- Wolcott Elementary¹
- Craftsbury Elementary¹
- Craftsbury Academy (High School & Middle School)¹
- Woodbury Elementary¹
- Hardwick Elementary¹
- Lakeview Elementary¹
- Hazen Union High School¹

Patricia A. Hannaford Career Center¹

Rutland Northeast Supervisory Union

- Otter Valley Union High School¹
- Barstow Memorial School²
- Leicester School²
- Lothrop School²
- Neshobe School²

SAU 70

• Marion W. Cross School¹

Slate Valley School District

- Benson Village School¹
- Castleton Elementary¹
- Castleton Village School¹



- Fair Haven Union High School¹
- Orwell Village School¹
- Fair Haven Grade School¹

Springfield School District

- Springfield High School¹
- Riverside Middle School¹
- Elm Hill School¹
- Union Street School¹

South Burlington School District

- South Burlington High School¹
- Orchard Elementary¹
- Frederick H Tuttle Middle School¹
- Gertrude E. Chamberlin School¹
- Rick Marcotte Central School¹

Southwest Vermont Supervisory Union

- Mt. Anthony Union High School¹
- Mt. Anthony Union Middle School¹
- Bennington Elementary School¹
- Molly Stark Elementary School¹
- Monument Elementary School¹
- Pownal Elementary School¹
- Shaftsbury Elementary School¹
- Woodford Hollow Elementary School¹

Southwest Vermont Career Development Center²

Two Rivers Supervisory Union

- Green Mountain Union High School¹
- Cavendish Town Elementary School¹
- Chester-Andover Elementary School¹
- Ludlow Elementary School¹
- Mount Holly Elementary School¹

Washington Central Unified Union School District

- U-32 High School¹
- Berlin Elementary¹
- East Montpelier Elementary¹
- Rumney School¹
- Doty Memorial School¹
- Calais Elementary¹
- Central Offices¹

Windham Central Supervisory Union

- Leland & Gray Union High School¹
- Jamaica Village School¹
- Marlboro Elementary School¹



- Townshend Elementary School¹
- Newbrook Elementary School¹
- Wardsboro Elementary School¹
- Windham Elementary School¹
- Dover Elementary School¹

Windham Northeast Supervisory Union

- Bellows Falls Middle School¹
- Bellows Falls Union High School¹
- Central Elementary School¹
- Saxtons River School¹
- Athens/Grafton Elementary School¹
- Westminster School¹

Windham Southeast Supervisory Union

- Academy School¹
- Oak Grove Elementary School¹
- Green Street Elementary School¹
- Brattleboro Area Middle School²
- Brattleboro Union High School & Windham Regional Career Center¹
- Dummerston Elementary School¹
- Guilford Central School¹
- Putney Central School¹
- Vernon Elementary School¹

Windham Southwest Supervisory Union

- Twin Valley Middle-High School¹
- Twin Valley Elementary School¹
- Stamford School¹
- Halifax School¹
- Readsboro Elementary¹

Windsor Central Supervisory Union

- Barnard Academy¹
- Killington Elementary¹
- Reading Elementary¹
- Woodstock Elementary¹
- Prosper Valley School¹
- Woodstock Union Middle-High School¹

Windsor Southeast Supervisory Union

- Windsor State Street School¹
- Albert Bridge Elementary School¹
- Weathersfield Elementary & Middle School¹
- Hartland Elementary School¹
- Windsor High School³

Winooski School District

• Winooski High School¹



- Winooski Middle School¹
- John F. Kennedy Elementary School¹

White River Valley Supervisory Union

- Rochester Elementary School¹
- Stockbridge School¹
- Bethel Elementary School²
- South Royalton Elementary School²
- White River Valley Elementary & Middle School¹
- White River Valley High School¹
- Sharon Elementary School¹
- The Newton School¹
- Chelsea Public School¹
- Tunbridge Central School¹

Independent Schools

- Bishop John A Marshall School¹
- Bridge School¹
- Brookhaven Treatment & Learning Center¹
- Burke Mountain Academy¹
- Burr and Burton Academy¹
- Centerpoint School¹
- Christ the King School , Burlington¹
- East Valley Academy (Grades 3-12)²
- Good Shepherd Catholic School¹
- Green Mountain Valley School¹
- Hiland Hall School¹
- Hilltop Montessori¹
- INSPIRE School for Autism²
- Kindle Farm School¹
- Kurn Hattin Homes for Children¹
- Lake Champlain Waldorf School¹
- Laraway School¹
- Long Trail School¹
- Lyndon Institute¹
- Maple Street School¹
- Maplehill School¹
- Mater Christi School¹
- Mid Vermont Christian School¹
- Mosaic Learning Center²
- Mount Mansfield Ski Club and Academy¹
- Mount Snow Academy¹
- Mount St. Joseph Academy¹
- Neighborhood School House¹
- Northeastern Family Institute (NFI):
 - o Arlington School¹
 - o Cornerstone School¹
 - o East Meadow School¹
 - o Turning Points School¹



- Okemo Mountain School¹
- Orchard Valley Waldorf School¹
- Pacem School¹
- Priority Placements¹
- Red Fox Community School¹
- Rice Memorial High School¹
- River Valley Technical Center³
- Rock Point School¹
- Rutland Area Christian School²
- St. Paul's Catholic School¹
- Saxon Hill School²
- Sheldon Academy¹
- SOAR Learning Center²
- Southshire Community School¹
- St. Johnsbury Academy¹
- St. Monica-St. Michael School¹
- Stratton Mountain School¹
- The Compass School¹
- The Grammar School¹
- The Howard Center:
 - o Jean Garvin School¹
 - o Faye Honey Knopp Memorial School¹
 - o Baird School¹
- The New School of Montpelier¹
- The Putney School³
- The Schoolhouse Learning Center¹
- The Sharon Academy¹
- Thetford Academy¹
- Upper Valley Waldorf School¹
- Vermont Academy¹
- Vermont Commons School¹
- Village School of North Bennington¹
- Wilder School³

