



Efficient and Healthy Schools Recognition Launch



- → Webinar is being recorded
- → All attendees are muted during this webinar
- → Please enter questions into the Q&A
- → Slides and recording will be sent out shortly after





Agenda

- 1 2024-2025 Efficient and Healthy Schools Program
- 2 Support through Technical Assistance
- 3 Apply for Recognition Opportunities
- 4 School District of Neillsville Program Experience
- 5 Question and Answer Session



Today's Presenters

Sydney ApplegateUS Department of Energy

Nate AllenUS Department of Energy



Shannon OliverNew Buildings Institute



Lance GregorichSchool District of Neillsville





The Efficient and Healthy Schools Program Team

U.S. Department of Energy







Berkeley Lab









New Buildings Institute











2024-2025 Efficient and Healthy Schools Program

Nate Allen
Building Technologies Office
US Department of Energy



Alignment with DOE Priorities



Reduce U.S. building emissions 60% by 2035 and 90% by 2050 vs. 2005 while enabling net-zero emissions economy-wide and centering equity and benefits to communities



Prioritize equity, affordability, and resilience

Ensure that the low-carbon buildings transition benefits disadvantaged communities, reduces energy-related costs, and increases the ability of communities to withstand stresses on building infrastructure



Increase building energy efficiency

Reduce onsite energy use intensity in buildings 30% by 2035 and 45% by 2050 vs. 2005



Accelerate onsite emissions reductions

Reduce onsite GHG emissions in buildings 25% by 2035 and 75% by 2050 vs. 2005



Transform the grid edge at buildings

Increase demand flexibility potential 3X by 2050 vs. 2020 to enable a low-cost and resilient net-zero grid



Minimize building life cycle emissions

Reduce embodied emissions from building materials and construction 90% by 2050 vs. 2005.



DOE Efficient and Healthy Schools Program

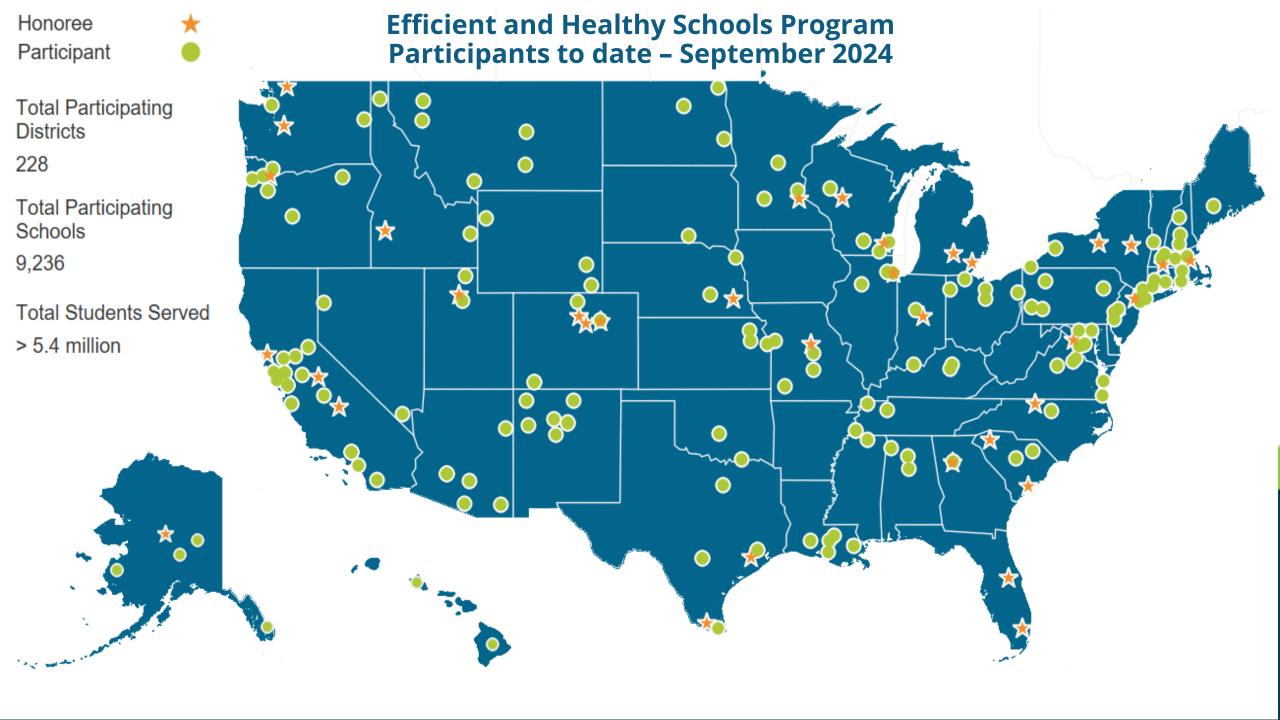


Aims to improve energy performance, advance resilience, and promote a healthy learning environment in schools.

Engages **K-12 schools**, especially those serving low-income student populations and in rural areas.

Provides technical assistance through direct consultations and recognition of exemplary school improvements.







Key Partner Opportunities



CONTACT US

Creating Healthy Indoor Air Quality in Schools





ENERGY STAR
Certification for
Buildings

For existing commercial buildings that operate more efficiently than 75% of similar buildings nationwide

ENERGY STAR Certification

EPA Grant Funding to Address IAQ in Schools



Get Involved and Find Out More!

- **Join** | Healthy Schools (lbl.gov)
- Subscribe to the Efficient and Healthy Schools Program Mailing List
- Resources | Healthy Schools (lbl.gov)

KEY DATES

- EHSP Topical Webinar
 - **→ November 14, 2024**
- Recognition Office Hours
 - **→** December 12, 2024
- Recognition application due
 - **→ December 20, 2024**

For more information, email schools@lbl.gov



2024-2025 EHSP Program Details

Shannon OliverNew Buildings Institute



Three ways to get involved



Join the Program

- National support network of best practices
- Free Technical Assistance
- One-on-one onboarding



Support Schools

- Engage with active schools and districts
- Be listed on program website
- National network of leading organizations



Gain Recognition

- National recognition
- Free Technical Assistance
- Onboarding and coaching



Technical Assistance: Categories



General Program Support

- Onboarding
- Identifying first steps & next steps
- Recognition submission assistance



Energy management

- Benchmarking
- Building assessments
- Energy analytics
- Retro commissioning



Goal Setting and Planning

- Develop district roadmap
- Facility planning & prioritization
- Documentation development: SOW, RFP, OPR



Technologies and Systems

- EEM identifications: HVAC, lighting, water, kitchens
- Energy Management Information Systems (EMIS) & Controls
- Commissioning
- Performance verification



Indoor Air Quality

- IAQ assessments and planning
- IAQ monitoring



Decarbonization

- Electrification approaches
- Emissions reduction calculations



Solar and Renewables

- Solar potential
- Program and funding opportunities



Resilience

- Technical Resilience Navigator
- Approaches to manage emerging risks e.g., extreme heat, wildfire smoke



Funding

- Identify federal, state, local and utility funding available
- Value proposition for funding pitch
- Performance based contracting



Technical Assistance: Process

ONBOARDING INTERVIEW

Participate in a simple onboarding interview after signing up for the program to identify a point of contact and needs. Or, send an email directly to schools@lbl.gov.

CONNECTED TO RESOURCES

We'll reach out to subject matter experts to get you connected on your behalf, and send you any applicable resources.

FOLLOW UP

We'll follow up with both participants and subject matter expert points of contact to ensure technical assistance is provided and beneficial.

MEETINGS AND CORRESPONDENCE

Additional meetings as needed or requested with either the program staff of subject matter experts.



Technical Assistance: Benchmarking

- Identify underperforming schools/buildings in your district to target for efficiency improvements
- Identify best practices that are replicable across schools
- Set investment priorities to compare savings across buildings in your district to decide how to allocate capital and maximize financial returns in energy efficiency
- Verify savings through continuous tracking of energy over time

- Share and report performance, educate classes and the town/city about how the schools are performing
- Earn recognition by best performing school in the district or energy star certification (75 or higher)
- Benchmark more than energy, include water, waste, greenhouse gas emissions



Technical Assistance: Tools and References

Quick Building Assessment Form and Tool

This tool provides identification of energy improvement opportunities, recommendations for energy efficiency measures, and associated health and safety benefits for various projects

DOE Asset Score

This tool allows users to generate energy retrofit measure recommendations and energy savings estimates

https://buildingenergyscore.energy.gov/

Third Party Needs Assessment

Use of a site audit or energy efficiency measure identification and impacts analysis as provided by a contractor (i.e., Energy Service Companies [ESCOs] or consultant).

School Prototype and Retrofit Package

https://www.energy.gov/sites/default/files/2022-11/Modeled%20Retrofit%20Package%20Performan ce%20for%20Prototype%20Schools Nov2022.pdf



Support Schools!

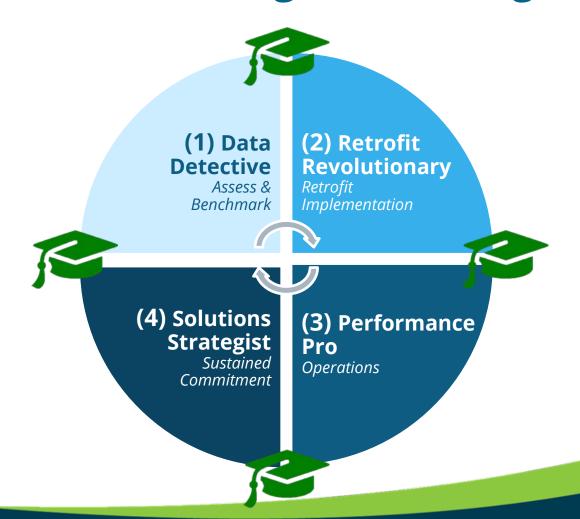
Our diverse group of supporters include contractors, manufacturers, state and regional agencies, community groups, nonprofit organizations, and more! If you are an organization implementing in energy performance or healthy learning environments that would like to join this list of organizations and show your support for the Program – Join today!

Join the Teaming List

There is vast interest and opportunity for collaboration between school districts and industry experts willing to support them in meeting their energy goals. To facilitate such partnerships, and to help school stakeholders in the Renew America's Schools Program, the Efficient and Healthy Schools Program, the ESPC Campaign, and the Better Buildings/Better Climate Challenge connect and communicate, DOE is compiling a Teaming Partner List. Join the Teaming **Partner List** to let prospective partners know you are interested in working together. Please note that this is not an application for any DOE programs or campaigns.



2024-2025 Recognition Categories





Preparation

Interested schools and districts will fill out a recognition application and request assistance from the Program if needed.

Announcement & Celebration

Schools and districts will be notified of recognition in January and will be invited to attend an in-person celebration in at the Green Schools Conference in March 2025.

March 2025



Schools and districts will submit application and supporting materials by **December 20, 2024**.



2024-2025 Recognition Categories

Data Detective

Honoring schools and districts that demonstrate best practices to prioritize school improvements through:

- → Building assessments
- → Benchmarking
- → Utilizing building data



Retrofit Revolutionary

Honoring schools and districts that showcase exemplary retrofit projects that improve and promote:

- → Energy efficiency projects
- → Resilience upgrades
- → Healthy learning environments improvements



IDEA Public Schools, TX

Recognition highlights:

- Utilized ENERGY STAR (ES) Portfolio Manager to benchmark 3 schools and headquarter building; all 4 sites obtained ES Building Certification. District plans to pursue certification in an additional 25 sites.
- IDEA improved building operation identified from the assessments, resulting in energy reduction and improved indoor air quality.



Data Detective

Students: 80,000 Schools: 143





Broward County Public Schools, FL

Recognition highlights:

- Successfully leveraged bond, ESPC, and federal funding (ESSER), to initiate multi-system energy retrofits that will reach over 230 schools and more than 1,000 structures.
- An example of the initiative SMART Program implemented HVAC optimization and controls in 25 schools that resulted in 15% to 35% energy savings for each HVAC system.



Retrofit Revolutionary

Students: 255,000 **Schools:** 329





2024-2025 Recognition Categories

Performance Pro

Honoring schools and districts that strive for continuous improvement throughout the organization through:

- → Operations and maintenance activities
- → Performance evaluations
- → Retro-commissioning activities



Solutions Strategist

Honoring schools and districts that develop plans and make committed goals to improving their buildings that:

- → Advance district-wide initiatives
- → Set broad-reaching goals
- → Include diverse stakeholder input







Recognition highlights:

- Maintained 4 FTE over 8 years to manage on-the-spot repairs and day-to-day operations of building automation system, including rapid response to COVID-19 ventilation recommendations.
- District's recommissioning team lowered site EUI by an average of 2.2 kBtu/ft²-yr. The team contributed to securing grant funding and integral of the district's Clean Energy Resolution passed in 2022.



Performance Pro

Students: 51,000 Schools: 109





Lansing Public School District, MI

Recognition highlights:

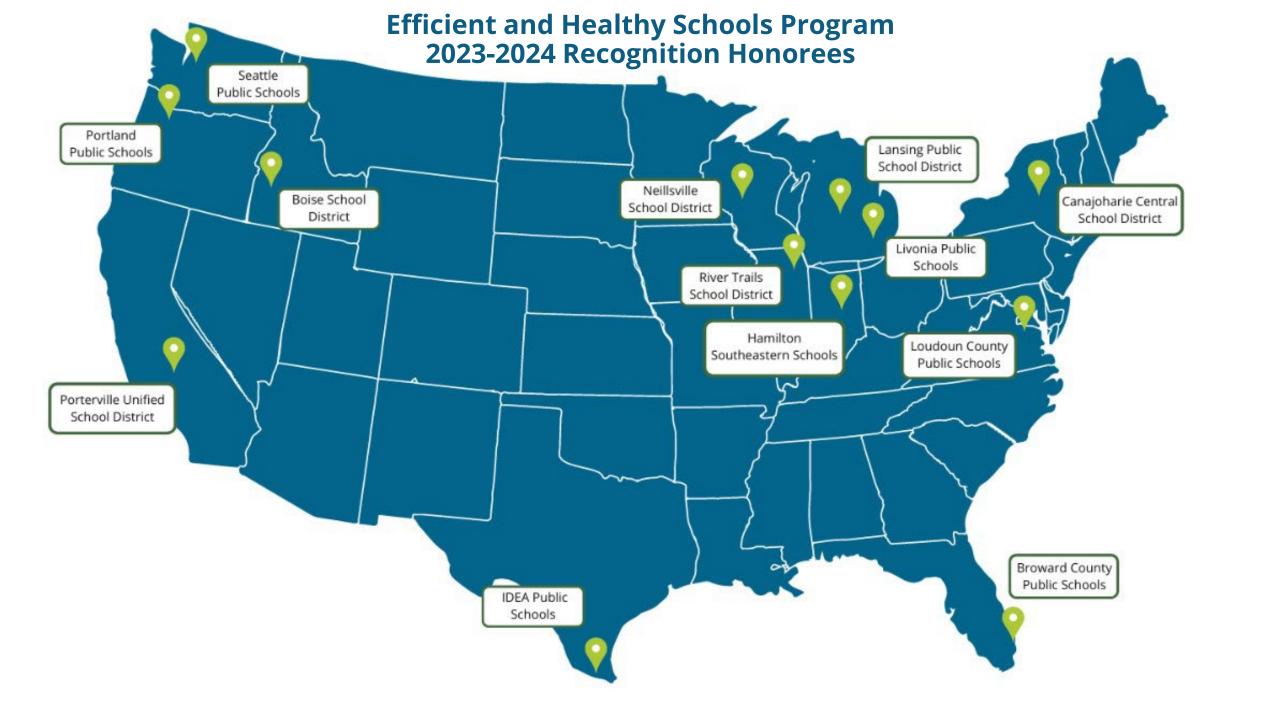
- District partnered with larger initiatives, such as Michigan Clean Cities, to update their design specifications to require renewable energy and energy efficiency measures.
- Student involvement is encouraged through an intern program and a newly launched energy careers pathway program.



Solutions Strategist

Students: 10,000 Schools: 28









Apply for Recognition opportunities today!





School District of Neillsville Program Experience

Lance Gregorich

Project Manager and Environmental Health and Safety Manager CESA 10 | School District of Neillsville



SCHOOL DISTRICT OF NEILLSVILLE

- Rural school district located in central Wisconsin
- 23-24 enrollment: 935
- 45.6% economically disadvantaged; 20% students with disabilities
- Below average revenue per pupil
- Home of "Chatty Belle" the World's Largest Talking Cow
- Mentioned in Tommy Boy





OVERVIEW AND TIMELINE

Main Issues: Deferred maintenance; aging infrastructure, inefficient equipment, staff and student complaints of poor indoor air quality





- Multi-year journey
 - 2021 Energy benchmarking, facility audit, Fund 46 plan
 - 2022 Project prioritization, financial planning, stakeholder engagement
 - 2023 Phase 1 of projects, capital referendum
 - 2024 Phase 2 of projects

Benchmarking and Auditing

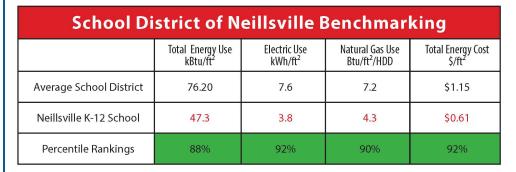
Project Prioritization Financial Planning

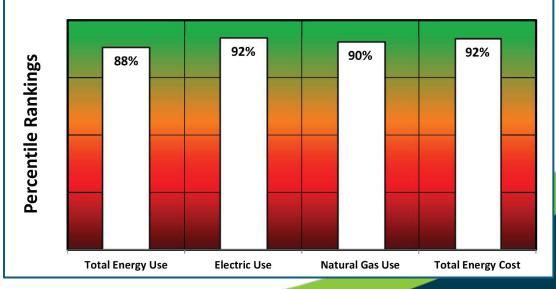
Stakeholder Engagement



SCOPE OF WORK & IMPACT

- Energy efficient LED lighting
- Energy efficient windows
- Energy efficient VAV air handling unit
- IAQ testing; HVAC changes to address issues
- Removed aging unit vent systems
- Added wall insulation
- New kitchen and tech ed shop ventilation
- Pneumatic to DDC controls upgrade
- Upgraded piping for AHU and controls to utilize current chiller instead of purchasing an additional chiller
- Upgraded electrical distribution to allow for future expansion and renewable energy opportunities
- New efficient water fixtures
- Upgraded technology







PROJECT PARTNERS

- District staff, administration and school

 Local Contractors board members
- Financial planners
- **Utility Representatives**
- Architects and Engineers

- **Environmental Health and Safety** Consultants
- **Project Managers**
- **Community Members**



KEY ASPECTS

Transparent communication between District, Architects, Engineers, Utilities, and

Vendors

- Stakeholder engagement
- Continuous planning and budgeting
- Open, competitive bidding







WHAT'S NEXT

- Updating long-term plans and budgeting for future phases
- Exploring renewable energy opportunities



Question & Answer



THANK YOU - Connect with us!!

- POLL
- Join | Healthy Schools (lbl.gov)
- Subscribe to the Efficient and Healthy Schools Program <u>Mailing List</u>
- Resources | Healthy Schools (Ibl.gov)

Apply for recognition today!

