

# Have you Considered Using ENERGY STAR® Certified Schools as Part of your State Energy Program?



## What are ENERGY STAR® certified schools?

ENERGY STAR® certified schools undergo superior energy management and operations to achieve recognition for outstanding energy performance and must meet indoor environmental quality standards. Benchmarking and certification begin in [ENERGY STAR Portfolio Manager®](#), a no-cost, interactive resource management tool that enables you to voluntarily benchmark the energy (and other utility) use of any type of building, all in a secure online environment.

ENERGY STAR certified properties **outperform 75 percent of similar properties across the country**. On average, they consume 35 percent less energy and contribute 35 percent fewer greenhouse gas emissions than their peers. In 2023, more than 1,600 K-12 schools were certified as ENERGY STAR. Cumulatively, more than 13,000, or about 10 percent, of the nation's over 129,000 K-12 schools have been certified as ENERGY STAR—the **opportunity to grow is significant**.

## What are the benefits of ENERGY STAR certification?

Cutting utility costs and reducing energy's impact on the environment are big benefits but the quality and condition of school buildings are being recognized as important factors for student learning. Several aspects of building performance are fundamental in providing an environment that is conducive to learning, including indoor air quality. Research has shown a relationship between facility conditions and absenteeism, teacher turnover rates, and occupant health.<sup>i</sup> ENERGY STAR certification introduces criteria for measuring comprehensive whole-building performance, which in addition to energy use, include the following areas:



**Indoor air quality (IAQ)** can be improved with ventilation as well as by removing the source of pollutants. Indoor pollutants may include gases (such as CO and CO<sub>2</sub>), chemicals (for example, cleaning agents), mold, and particulates. Because children have higher breathing and metabolic rates than adults, they are more vulnerable to many environmental threats.







**Thermal, visual, and acoustic comfort** have a significant impact on student performance. Warm temperatures reduce alertness, whereas cold temperatures reduce dexterity. Studies show that, on average, day lighting improves learning by 21 percent<sup>ii</sup>. Noise from outside the building, interior hallways, and building systems (such as fans, boilers, and compressors) can cause levels of discomfort and stress that interfere with learning.

## What can be done?

- Incorporate ENERGY STAR tools and resources in outreach to schools.
- Connect with ENERGY STAR partners, which include non-profits and service and product providers that can offer energy management services for K-12 school facilities.
- Host meetings, webinars, or workshops to provide opportunities for ENERGY STAR partners to share their expertise with K-12 school stakeholders.
- Develop a K-12 school energy management strategy that includes your ENERGY STAR partners.
- Celebrate and build on the momentum of school successes and ENERGY STAR excellence across the state.

By pursuing an ENERGY STAR certification, K-12 schools may achieve the following outcomes:



-  **Recognition** is fundamental to education. Schools by their very nature are competitive—they're some of the only buildings built with permanent trophy cases. Achieving ENERGY STAR certification exemplifies the certified school's superior performance.
-  **Learning laboratories** can enhance classroom learning when teachers use the school building infrastructure or operations to enhance instruction. This can include collecting and analyzing data on school site-based systems as project-based learning activities, or comparing systems of the site as scientific experimentation. ENERGY STAR schools can provide the basis for learning laboratories to produce positive impacts on student engagement and academic achievement as compared to instructional activities that are more abstract or textbook based.<sup>iii</sup>
-  **Statewide energy goals** as specified in state energy and climate action plans can be met in part by school district energy efficiency improvements. K-12 buildings, among other publicly-owned buildings, often lead by example to demonstrate cost savings through benchmarking and efficiency upgrades that mobilize privately-owned building sector to follow suit.
-  **Building resiliency** is important for schools that are threatened by severe weather events (such as tornadoes, hurricanes, floods, or fire). Pursuing building energy efficiency improvements and using appropriate construction materials and techniques can make buildings more structurally sound and able to withstand hazardous conditions.

## Additional resources

**ENERGY STAR for K-12 Schools:** <https://www.energystar.gov/K-12>

**ENERGY STAR Certification:** <https://www.energystar.gov/buildingcertification>

**How to Apply for ENERGY STAR Certification:** [https://www.energystar.gov/buildings/building\\_recognition/building\\_certification/how\\_apply](https://www.energystar.gov/buildings/building_recognition/building_certification/how_apply)

**ENERGY STAR Score for K-12 Schools:** <https://www.energystar.gov/buildings/tools-and-resources/energy-star-score-k-12-schools>

**Energy Use in K-12 Schools:** [https://www.energystar.gov/sites/default/files/tools/DataTrends\\_K12Schools\\_20150129.pdf](https://www.energystar.gov/sites/default/files/tools/DataTrends_K12Schools_20150129.pdf)

**Find ENERGY STAR Certified Buildings and Plants:** [https://www.energystar.gov/buildings/certified\\_buildings\\_and\\_plants](https://www.energystar.gov/buildings/certified_buildings_and_plants)

**ENERGY STAR Partner List:** <https://www.energystar.gov/partnersearch>

**Cost-Free Verification of ENERGY STAR Applications:** <https://www.energystar.gov/buildings/resources-audience/licensed-professionals/cost-free-verification>

**National Best Practices Manual for Building High Performance Schools:** <https://www.energy.gov/eere/articles/national-best-practices-manual-building-high-performance-schools>

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<sup>i</sup> EPA, Protecting IAQ During School Energy Efficiency Retrofit Projects with Energy Savings Plus Health Guidelines.

<https://www.epa.gov/iaq-schools/protecting-iaq-during-school-energy-efficiency-retrofit-projects-energy-savings-plus>

<sup>ii</sup> Re-Analysis Report: Daylighting in Schools, Additional Analysis; New Buildings Institute. <https://eric.ed.gov/?id=ED470978>.

<sup>iii</sup> Kerlin, Steve, et al. "Green Schools as Learning Laboratories? Teachers' Perceptions of Their First Year in a New Green Middle School," Journal of Sustainability Education, January 2015. <http://www.isedimensions.org/wordpress/wp-content/uploads/2015/01/Kerlin-et-al-JSE-Vol-8-Jan2015.pdf>.