

Have you considered using ENERGY STAR Certified Schools as part of your State Energy Program ?



The simple choice for energy efficiency.

What are they?

They're schools that undergo superior design, construction and operation to achieve recognition through measured outstanding performance. ENERGY STAR certified facilities **outperform 75 percent of similar facilities across the country**. On average, they consume 35 percent less energy and contribute 35 percent fewer greenhouse gas emissions than their peers. In 2017 a total of 2,708 K-12 schools were certified as ENERGY STAR, cumulatively 10,938, or about 10 percent, of the nation's over 102,000 K-12 schools have been certified as ENERGY STAR – **the opportunity to grow is significant**.

Is there a benefit?

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. Research has shown a relationship between facility conditions and absenteeism, teacher turnover rates, and occupant health. A whole-building approach to your ENERGY STAR certification can yield additional benefits that include the following.



Security and lighting can be enhanced with proper exterior lighting as well as adequate lighting in hallways and stairwells.



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 radon), 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. 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.



Building resiliency is an important consideration for schools that are threatened by severe weather events (such as tornados, hurricanes, floods or fire). There are building materials and techniques that can improve a building's energy efficiency while at the same time making it more structurally sound and able to better withstand hazardous conditions.

...benefits



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 announces to the school district, community, state and nation that the certified school is special and is a superior performer.



Learning laboratories can enhance classroom learning by teachers using the school building infrastructure or operations to enhance instruction. This can include collecting and analyzing data on the 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⁽¹⁾.

What Can be Done?

- Discover and develop ENERGY STAR partnerships.
- Host meetings, webinars or workshops letting partners share their ENERGY STAR experiences.
- Shape a strategy that includes your ENERGY STAR partners.
- Use the bully pulpit of the Governor, Lieutenant Governor, First Lady and Cabinet Secretary to recognize ENERGY STAR excellence in the state. Capitalize on and celebrate local school successes.

Need More Information?

ENERGY STAR certification

<https://www.energystar.gov/buildings/about-us/energy-star-certification>

How to apply for ENERGY STAR certification

<https://www.energystar.gov/buildings/facility-owners-and-managers/existing-buildings/earn-recognition/energy-star-certification/how-app-1>

ENERGY STAR Score for K-12 Schools

<https://www.energystar.gov/buildings/tools-and-resources/energy-star-score-k-12-schools>

ENERGY STAR Building Upgrade Manual Chapter 10: K-12 Schools

<https://www.energystar.gov/buildings/tools-and-resources/energy-star-building-upgrade-manual-chapter-10-k-12-schools>

Energy Use in K-12 Schools

https://www.energystar.gov/sites/default/files/tools/DataTrends_K12Schools_20150129.pdf

Find ENERGY STAR certified buildings and plants

https://www.energystar.gov/sites/default/files/tools/DataTrends_K12Schools_20150129.pdf

ENERGY STAR Partner List

https://www.energystar.gov/index.cfm?fuseaction=estar_partner_list.showPartnerSearch

Cost-free verification of ENERGY STAR applications

https://www.energystar.gov/buildings/service_providers/verify/pro_bono_verification_energy_star_applications

Collaborative High Performance Schools (CHPS) Best Practices Manual

<http://www.chps.net/dev/Drupal/node/288>

(1) 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, Accessed January 2016. http://www.jsedimensions.org/wordpress/content/green-schools-as-learning-laboratories-teachers-perceptions-of-their-first-year-in-a-new-green-middle-school-2_2015_01/.