

AASHE STARS Credits through ENERGY STAR®

The simple choice for energy efficiency.



Through ENERGY STAR, the U.S. Environmental Protection Agency offers a host of tools and resources to owners and managers at no cost to help them improve the energy efficiency of their buildings and save money, save energy, and protect the environment. This guide summarizes ENERGY STAR tools and resources that may be used to earn AASHE STARS¹ credits (version 2.1, July 2017).

ENERGY STAR Portfolio Manager

Portfolio Manager (www.energystar.gov/benchmark) is EPA's free, online, secure tool that anyone can use to assess the energy, water, and waste/ materials performance of their buildings. Many types of properties can also receive a 1-100 ENERGY STAR, which compares a building's energy performance against similar buildings nationwide. Buildings that earn a 75 or higher may be eligible for ENERGY STAR certification, the mark for top energy performance.

AASHE STARS Credit	Credit Description	Use Case for ENERGY STAR Portfolio Manager
OP 3: Building Operations and Maintenance (5 points available)	For institutions that operate and maintain their buildings in ways that protect the health of building occupants and the environment.	Earn points for benchmarking building energy and water use in ENERGY STAR Portfolio Manager, and earn additional points by certifying your eligible buildings as ENERGY STAR. See which types of properties are eligible for certification at www.energystar.gov/eligiblepropertytypes . Use the Portfolio Manager "AASHE STARS Reporting Template" for documentation (see Appendix 1). Note that ENERGY STAR certification is a non-GBC rating system.
OP 5: Building Energy Consumption (6 points available)	For institutions that have reduced their building's energy usage.	Earn points for reducing energy use over baseline (Part 1) and/or for performing at or better than a defined level of energy performance (Part 2). Use the Portfolio Manager "AASHE STARS Reporting Template" for documentation.
OP 6: Clean and Renewable Energy (4 points available)	For institutions that support the development and use of energy from clean and renewable sources.	Earn points for onsite solar and wind electricity generation where RECs are retained, under Option 1. Earn points through Option 3 and Option 4 for catalyzing offsite generation where RECs are retained or by buying RECs or green power where RECs are retained. Note that it isn't possible to earn points under Option 2 of this credit, as Portfolio Manager only currently allows the tracking of onsite solar and wind. Use the Portfolio Manager "AASHE STARS Reporting Template" for documentation.
OP 19: Waste Minimization and Diversion (8 points available)	For institutions that are minimizing their production of waste, diverting materials from landfills/ incinerators, and conserving resources by recycling and composting.	Earn points for reducing total waste per campus user over baseline (Part 1), performing at or better than a defined level of waste performance (Part 2), and for diversion (Part 3). Use the Portfolio Manager "AASHE STARS Reporting Template" for documentation. Two notes related to Option 3: there is no Portfolio Manager metric for re-sold materials, and the only Portfolio Manager metric that could apply to residual conversion is Disposed Waste – Waste to Energy.

¹STARS is a transparent, self-reporting framework for colleges and universities to measure their sustainability performance. Colleges and universities can get a STARS Rating based on how many points they earn – Bronze (25 points), Silver (45), Gold (65), or Platinum (85). Learn more on the STARS website at <https://stars.aashe.org>. This resource was created by EPA as a guide; to confirm credit eligibility, please consult with AASHE.

AASHE STARS Credit	Credit Description	Use Case for ENERGY STAR Portfolio Manager
OP 20: Construction and Demolition Waste Diversion (1 point available)	For institutions that have diverted construction and demolition (C&D) wastes.	Earn points for diverting construction and demolition waste. Portfolio Manager includes five Building Materials metrics for each management method of Recycled, Donated/Reused, and Disposed. Total the metrics of the first two management methods for total C&D diversion. Use the Portfolio Manager "AASHE STARS Reporting Template" for documentation.
OP 22: Water Use (4–6 points available)	For institutions that have reduced water use.	Earn points for reducing potable water use per campus user over baseline, reducing potable water use per gross floor area over baseline, and for reducing total potable and non-potable water use per acre of vegetated grounds over baseline. Use the Portfolio Manager "AASHE STARS Reporting Template" for documentation.

ENERGY STAR Condensed Course

Interested in teaching your students about building energy efficiency? EPA offers an interactive, 3-unit condensed course exploring the topic (www.energystar.gov/course). The content is available from EPA at no cost and is filled with real-world examples and practical, hands-on student activities. It includes an overview document about the course, slide decks for each unit, and descriptions of optional assignments, and instructors can adapt it and use it as they please. The main optional assignment is a project where students apply their learning by going out into their community to benchmark a building using ENERGY STAR Portfolio Manager.

AASHE STARS Credit	Credit Description	Use Case for ENERGY STAR Condensed Course
AC 1: Academic Courses (14 points available)	For institutions that offer sustainability courses and that include sustainability in courses across the curriculum.	Create a new, short course using the ENERGY STAR Condensed Course content as a foundation, or integrate the content into existing courses across campus.
AC5: Immersive Experience (2 points available)	For institutions that offer sustainability-focused immersive experience programs.	Work with your local or state government and other groups to design an immersive program that engages students in support of an existing or potential benchmarking initiative/ requirement, and that incorporates the ENERGY STAR Condensed Course content as practical education and training. A map of existing benchmarking initiatives can be found at www.energystar.gov/policiesandprograms . Note that engagement in support of the community could earn points in EN 13: Community Service or EN 14: Participation in Public Policy.
AC 8: Campus as a Living Laboratory (4 points available)	For institutions that utilize their infrastructure and operations as living environments for multidisciplinary learning and applied research that advances sustainability on campus.	Work with your facilities department to design an applied learning opportunity that engages students in benchmarking campus buildings in ENERGY STAR Portfolio Manager and recommending a strategy for, and examples of, possible efficiency improvements. Use the ENERGY STAR Condensed Course content for practical education and training.
EN 12: Continuing Education (5 points available)	For institutions that provide continuing education courses and programs in sustainability to the community.	Create a short, continuing education course using the ENERGY STAR Condensed Course content as a foundation, or integrate the content into courses in an existing sustainability-themed certificate program.

Treasure Hunt

To encourage positive action, quick wins on efficiency, and ownership over solutions, ENERGY STAR recently released a set of materials for completing Treasure Hunts, where teams walk through their buildings to identify saving opportunities (www.energystar.gov/treasurehunt). Visit the Treasure Hunt page to learn more and view key resources including an overview guide, treasure map checklists for specific property types (offices, k-12 schools, retail stores, hospitals, and labs), and a spreadsheet for organizing and summarizing saving opportunities.

AASHE STARS Credit	Credit Description	Use Case for ENERGY STAR Treasure Hunt
AC 8: Campus as a Living Laboratory (4 points available)	For institutions that utilize their infrastructure and operations as living environments for multidisciplinary learning and applied research that advances sustainability on campus.	Hold an ENERGY STAR Treasure Hunt that is organized and led by students or student teams. You could incorporate the ENERGY STAR Condensed Course as part of this event, for practical training and education before the Treasure Hunt. Note that you could also use the event as an opportunity to launch a student peer educator program (EN 1) to encourage efficient behavior.

Competition resources

ENERGY STAR offers a variety of resources that you can use to plan and hold an efficiency competition that engages the campus community in a fun and educational way (www.energystar.gov/battleofthebuildings). Key resources include a competition guide, data management guide, spreadsheet data tracker, and communications materials that encourage efficient behaviors. You can even co-brand your competition with ENERGY STAR to leverage our name and get extra support.

AASHE STARS Credit	Credit Description	Use Case for ENERGY STAR competition-hosting resources
AC 8: Campus as a Living Laboratory (4 points available)	For institutions that utilize their infrastructure and operations as living environments for multidisciplinary learning and applied research that advances sustainability on campus.	Hold an energy-efficiency competition that is organized and led by students or student teams. Note that you could also use the competition as an opportunity to launch a student peer educator program (EN 1) to encourage efficient behavior.
EN 5: Outreach Campaign (4 points available)	For institutions that hold sustainability outreach campaigns that yield measurable, positive results in advancing the institution's sustainability performance (e.g., a reduction in energy or water consumption).	Hold an energy-efficiency competition among campus buildings or departments. Note that you could also use the competition as an opportunity to launch an employee peer educator program (EN 7) to encourage efficient behavior.

Target Finder

The EPA online Target Finder tool (www.energystar.gov/targetfinder) is designed to help architects, engineers, and property owners establish realistic energy use targets for commercial new construction projects.

AASHE STARS Credit	Credit Description	Use Case for ENERGY STAR Target Finder
OP 4: Building Design and Construction (3 points available)	For institutions that have incorporated environmental features into their design and construction projects.	Earn points for new construction and major renovation buildings 5 years old or less that achieved Designed to Earn the ENERGY STAR. Note that Designed to Earn the ENERGY STAR is a non-GBC rating system. Apply for the recognition through Portfolio Manager.

Energy-efficient appliances, electronics, lighting, appliances, and more

ENERGY STAR certified products are independently verified to save energy without sacrificing features or functionality (www.energystar.gov/products). Look for the ENERGY STAR label to save money on your energy bills and help protect our environment.

AASHE STARS Credit	Credit Description	Use Case for ENERGY STAR Certified Products
OP 11: Sustainable Procurement (3 points available)	For institutions that apply sustainability criteria when making procurement decisions.	Under part 3 of this credit, earn points for publishing a stated preference for ENERGY STAR products in purchasing decisions.
OP 12: Electronics Purchasing (1 point available)	For institutions that are supporting markets for environmentally preferable computers and other electronic products.	Through STARS version 2.2 , colleges and universities can for the first time earn points for ENERGY STAR products that are not otherwise certified.

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APPENDIX 1: AASHE STARS Reporting Template

The “AASHE STARS Reporting Template” allows users to easily generate all Portfolio Manager metrics that can earn points toward AASHE STARS. [Add the template to your Portfolio Manager account by clicking here.](#) Below are some pointers on using the template.

- **Boundaries, boundaries, boundaries.** For this template to be most useful, the buildings you’re benchmarking in Portfolio Manager should align with your STARS organizational boundary.
- **First, run the data quality checker in Portfolio Manager.** The data quality checker does just what its name suggests, flagging possible issues in your inputs so that you can easily edit them. Run the checker from the Summary tab of each property before using the “AASHE STARS Reporting Template” to generate metrics.
- **Adjust the template’s timeframe based on what you want to see.** Choose “Compare Two Years” to generate metrics for a baseline and performance year. If you want to use three-year baseline and performance periods, you’ll need to run the report twice, choosing “Date Range” and setting that for each three-year period.
- **After running your report(s) using the template, download results in Excel.** After making needed conversions and calculations, you can copy the data into the STARS Reporting Tool.
- **It’s RECquired.** Note that per OP 6: Clean and Renewable Energy, the Portfolio Manager metric “Green Power – Offsite (kWh)” only includes electricity use for which RECs are retained.
- **Get your denominator right.** In STARS, part 2 of OP 5: Building Energy Consumption uses “EUI-adjusted floor area” that accounts for energy intensive space. Compare the site or source EUIs of your buildings against the U.S. National Median Reference Values for Office to determine whether they can be counted as energy intensive space in STARS, which AASHE defines as space with an “average energy use intensity (EUI) that is at least twice that of office/administrative space”.

Office Site EUI (kBtu/ft ²)	Office Source EUI (kBtu/ft ²)
52.9	116.4

- **Convert generated metrics to MMBtu where needed.** AASHE STARS specifies that some fields be reported in MMBtu, noting the conversions below:

Energy Unit	MMBtu Equivalent
1 kWh	0.003412
1 MWh	3.412
1 therm	0.1
1 kBtu	0.001
1 ton-hour	0.012
1 MJ	0.000948

- **The grass isn’t greener.** Note that per OP 22: Water Use, the Portfolio Manager metric “Irrigated Area” is equivalent to “vegetated grounds” in STARS.
- **Note that GHG metrics in Portfolio Manager don’t align with AASHE STARS data requirements.** For this reason, GHG metrics were not included in the Portfolio Manager template. STARS requires Scope 1 and Scope 2 emissions data for OP 1: Greenhouse Gas Emissions, but Portfolio Manager only currently tracks Scope 1 and half of Scope 2 (not the market-based emissions).

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