



ENERGY STAR® IMPACTS—2021

The simple
choice for
energy
efficiency.



April 2022

ENERGY STAR® delivers real energy, environmental, and economic impacts. As the government-backed symbol for energy efficiency, ENERGY STAR provides simple, credible, and unbiased information that consumers and businesses rely on to make well-informed decisions. Thousands of industrial, commercial, utility, state, and local organizations—including nearly 40 percent of the Fortune 500®—partner with the U.S. Environmental Protection Agency (EPA) to deliver cost-saving energy efficiency solutions through voluntary action.

ENERGY STAR results

- Since 1992, ENERGY STAR and its partners helped American families and businesses save **5 trillion** kilowatt-hours of electricity, avoid more than **\$500 billion** in energy costs, and achieve **4 billion** metric tons of greenhouse gas reductions.^{1,2}
- Over the lifetime of the program, every dollar EPA has spent on ENERGY STAR resulted in nearly **\$350** in energy cost savings for American business and households.¹
- In 2020 alone, ENERGY STAR and its partners helped Americans save more than 520 billion kilowatt-hours of electricity and avoid **\$42 billion** in energy costs. These savings resulted in emissions reductions of more than 400 million metric tons of greenhouse gases, roughly equivalent to more than five percent of U.S. total greenhouse gas emissions.^{1,2}
- Over the life of the program, for every dollar of EPA investment, **3 metric tons** of GHGs have been reduced.²
- ENERGY STAR's 2020 energy savings also led to reductions of 210,000 short tons of sulfur dioxide, 210,000 short tons of nitrogen oxides, and 20,000 short tons of fine particulate matter (PM2.5). This avoided air pollution was responsible for an estimated **\$7 - 17 billion** in public health benefits.²
- The ENERGY STAR Program leverages significant private investment – over the life of the program, every dollar EPA has spent on ENERGY STAR resulted in **\$230** invested by American businesses and households in energy efficient infrastructure and services.¹
- More than **90%** of American households recognize the ENERGY STAR.³
- More than **840** utilities, state and local governments, and nonprofits leverage ENERGY STAR in their efficiency programs, reaching roughly **95%** of households in all 50 states. Nationwide, utilities invested \$7.6 billion in energy efficiency programs in 2020.⁴
- Over **800,000** Americans are employed in manufacturing or installing ENERGY STAR certified appliances, including heating and cooling equipment -- roughly 35% of an estimated 2.4 million U.S. energy efficiency jobs in 2019.⁵



ENERGY STAR products

- In 2020, ENERGY STAR certified products helped consumers save 240 billion kilowatt-hours of electricity, avoid **\$24 billion** in energy costs, and achieve 180 million metric tons of greenhouse gas reductions.^{1,2}
- Americans purchased more than **300 million** ENERGY STAR certified products and more than 300 million ENERGY STAR certified light bulbs in 2020, for cumulative totals exceeding 7 billion products and more than 5 billion light bulbs, respectively.
- For the first time, a majority of American households surveyed reported purchasing an ENERGY STAR certified product.³
- The estimated annual market value of ENERGY STAR product sales is more than **\$100 billion**.
- EPA sets definitions of efficiency leadership for more than **75** residential and commercial product categories. Currently, more than **80,000** product models have earned the ENERGY STAR based on these rigorous criteria.
- More than **3,800** product models from over 220 manufacturers were recognized as “ENERGY STAR Most Efficient” in 2021.
- By choosing ENERGY STAR, a typical household can save about **\$450** on their energy bills and still enjoy the quality and performance they expect.⁶
- **70%** of purchasers would recommend ENERGY STAR products to a friend.³

[Learn more about ENERGY STAR products.](#)

ENERGY STAR for commercial buildings

- In 2020, the ENERGY STAR program for commercial buildings helped businesses and organizations save 250 billion kilowatt-hours of electricity, avoid **\$16 billion** in energy costs, and achieve 180 million metric tons of greenhouse gas reductions.^{1,2}
- In 2021 alone, more than **280,000** commercial properties used EPA's ENERGY STAR Portfolio Manager® tool to measure and track their energy use, water use, and/or waste and materials. These buildings comprise nearly 27 billion square feet of floorspace—more than a quarter of all the commercial floorspace in the nation.
- More than **6,000** buildings earned the ENERGY STAR in 2021, bringing the total to over 39,000 buildings.
- On average, ENERGY STAR certified buildings use **35%** less energy than typical buildings nationwide.
- As of the end of 2021, **39** local governments, **four** states, and **one** Canadian province rely on EPA's ENERGY STAR Portfolio Manager® tool as the foundation for their energy benchmarking and transparency policies.

[Learn more about ENERGY STAR for commercial buildings.](#)

ENERGY STAR for industrial plants

- In 2020, the ENERGY STAR program for industrial plants helped businesses save 30 billion kilowatt-hours of electricity, avoid **\$2 billion** in energy costs, and achieve 30 million metric tons of greenhouse gas reductions.^{1,2}
- As of 2021, **33** diverse industrial sectors work with ENERGY STAR to strategically manage their energy use, from cookie and cracker bakeries and pharmaceutical plants to integrated steel mills and petroleum refineries.
- **90** industrial plants earned the ENERGY STAR in 2021.
- **28** industrial plants achieved energy intensity reductions in the 2021 ENERGY STAR Challenge for Industry campaign in which industrial sites commit to reducing their energy intensity by 10% within five years.

[Learn more about ENERGY STAR for industrial plants.](#)

ENERGY STAR for the residential sector

- In 2020, the ENERGY STAR residential new construction program helped homeowners save 3 billion kilowatt-hours of electricity, avoid **\$390 million** in energy costs, and achieve 4 million metric tons of greenhouse gas reductions.^{1,2}
- More than **2.3 million** ENERGY STAR certified new homes and apartments have been built to date, including more than 120,000 in 2021 alone.
- Nearly **3,000** builders, developers, and manufactured housing plants are ENERGY STAR partners, including all of the nation's twenty largest home builders. More than **8.5%** of U.S. homes constructed in 2021 (including single-family, multifamily, and manufactured homes) were ENERGY STAR certified.
- ENERGY STAR certified homes and apartments are at least **10%** more energy efficient than those built to code and achieve a 20% improvement on average while providing homeowners and residents with better quality, performance, and comfort.
- In 2021, Home Performance with ENERGY STAR program reached the milestone of retrofitting over 1 million homes over the lifetime of the program.

[Learn more about ENERGY STAR for the residential sector.](#)



For more information on our calculation methods, see the [Technical Notes](#) (PDF, 150 KB). For ENERGY STAR figures broken down geographically by state, see [ENERGY STAR State Fact Sheets](#). For achievements by ENERGY STAR Award Winners, see the [ENERGY STAR Award Winners Page](#).

References

The majority of data cited is from 2021. In cases where 2021 data is not yet available, prior year data is used. All instances are noted as such.

1. Estimated energy cost savings represent the present value of net energy cost savings, calculated by taking the difference between total energy bill savings and the incremental additional investment in energy-efficient technologies and services.
2. Estimates of contributions to emissions reductions do not account for overlapping impacts of regulatory programs and may be affected by other dynamics on the electrical grid.
3. EPA Office of Air and Radiation, Climate Protection Partnerships Division. (2020). National Awareness of ENERGY STAR® for 2019: Analysis of 2019 CEE Household Survey. <http://energystar.gov/awareness>.
4. ACEEE. (2021). The 2021 State Energy Efficiency Scorecard. <https://www.aceee.org/research-report/u2201>
5. U.S. Department of Energy. (2021). U.S. Energy and Employment Report. <https://www.energy.gov/useer>. The survey does not account for retail employment.
6. Lawrence Berkeley National Laboratory. (2020). Typical House Estimates. Prepared for EPA Office of Air and Radiation, Climate Protection Partnerships Division.