

# ABOUT ENERGY STAR® – 2021

The simple choice for energy efficiency.



April 2022

## What is ENERGY STAR?

ENERGY STAR® is the government-backed symbol for [energy efficiency](#), providing 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% of the Fortune 500®—partner with the U.S. Environmental Protection Agency (EPA) to deliver cost-saving energy efficiency solutions that protect the climate while improving air quality and protecting public health. Since 1992, ENERGY STAR and its partners have 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. 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. 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.

## ENERGY STAR products

ENERGY STAR is the simple choice for energy efficiency, making it easy for consumers and businesses to purchase products that save them money and protect the environment. EPA ensures that each product that earns the label is independently certified to deliver the efficiency performance and savings that consumers have come to expect. It's that integrity that led Americans to purchase more than 300 million [ENERGY STAR certified products](#) in 2020 and more than 300 million ENERGY STAR certified light bulbs, with a market value of more than \$100 billion. In fact, an average of 800,000 ENERGY STAR certified products was sold every day in 2020, bringing the total to more than 7 billion products sold since 1992.

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

## ENERGY STAR for buildings and plants

ENERGY STAR tools and resources help businesses identify cost-effective approaches to managing energy use in their buildings and plants—enabling the private sector to save energy, increase profits, and strengthen their competitiveness. From commercial properties such as hospitals, schools, offices, and [tenant spaces](#) to industrial facilities such as cookie and cracker bakeries and integrated steel mills, thousands of businesses and organizations look to [ENERGY STAR for guidance on strategic energy management](#).

The program's popular online tool, [ENERGY STAR Portfolio Manager®](#), was used in 2021 to measure and track the energy, water, and/or waste and materials of more than 280,000 commercial properties, comprising nearly 27 billion square feet of floorspace, across the nation. For eligible buildings, the tool calculates a 1–100 ENERGY STAR score, which has become the industry standard for rating a facility's energy performance. EPA's ENERGY STAR tools for industrial plants include industry-specific [Energy Performance Indicators \(EPIs\)](#), which provide companies with the information they need to make smart investment decisions. [ENERGY STAR Tenant Space](#) is a new EPA recognition to reduce utility bills and greenhouse gas emissions in leased spaces.

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

## DID YOU KNOW?



**90%** of American households recognize the ENERGY STAR label, making it one of the most widely recognized consumer symbols in the nation.

The nation's twenty largest homebuilders all build ENERGY STAR certified homes.

**33 different industrial sectors**—from bakeries and steel mills to pharmaceutical plants, distilleries, and refineries—work with ENERGY STAR to manage their energy use.



Americans purchased ENERGY STAR certified products in 2020 with a market value of more than **\$100 billion.**



## ENERGY STAR residential new construction

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. Nearly three thousand builders, developers, and manufactured housing plants are ENERGY STAR partners, including all of the nation's twenty largest home builders. Over 2.3 million ENERGY STAR certified homes have been built to date, including more than 120,000 in 2021 alone. EPA also provides trusted guidance and online tools to help homeowners make smart decisions about improving the energy efficiency of their existing homes. Learn more about ENERGY STAR for the residential sector.

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

## Utilities and local governments rely on ENERGY STAR

Nationwide, utilities invested \$7.6 billion in energy efficiency programs in 2020. With hundreds of different utilities scattered around the country, EPA plays a critical unifying role to guide their energy efficiency programs. EPA enables utilities to leverage ENERGY STAR as a common national platform, avoiding the creation of hundreds of independent utility programs across the nation, which could fragment the market and stall innovation. 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.

Additionally, 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](#) and/or [building performance standards](#), creating uniformity for businesses and reducing transaction and implementation costs.

## ENERGY STAR, jobs, and the economy

ENERGY STAR supports the transition to a clean energy economy by fostering jobs and economic development, greater competitiveness, and a healthy environment. ENERGY STAR certified products, homes, buildings, and plants helped save Americans families and businesses more than 520 billion kilowatt-hours of electricity and avoid \$42 billion in energy costs in 2020 alone. 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.

Additionally, according to the U.S. Energy and Employment Report, over 700,000 Americans are employed in manufacturing or installing ENERGY STAR certified products -- roughly 35% of an estimated 2.1 million U.S. energy efficiency jobs in 2020.<sup>1</sup> Moreover, by increasing energy efficiency, ENERGY STAR is supporting U.S. energy security and helping improve the reliability of the electricity grid.



More than **840** utilities, state and local governments, and nonprofits leverage ENERGY STAR in their energy efficiency programs, reaching roughly 95% of households in all 50 states.

In 2021 alone, more than **280,000** commercial properties used EPA's ENERGY STAR Portfolio Manager® tool to track their energy use, water use, and/or waste and materials.



Launched in December 2021, ENERGY STAR Home Upgrade is a carefully crafted set of six high-impact, efficient electric improvements that deliver significant energy and cost savings.

Over **700,000** Americans are employed in manufacturing or installing ENERGY STAR certified products — roughly 35% of an estimated 2.1 million U.S. energy efficiency jobs in 2020.

<sup>1</sup> U.S. Department of Energy. (2021). U.S. Energy and Employment Report. <https://www.energy.gov/useer>

## ENERGY STAR and the environment

ENERGY STAR is an important tool in fighting climate change, improving air quality, and protecting public health. By reducing emissions of greenhouse gases and other air pollutants, ENERGY STAR also provides states and local governments with more flexibility and reduced costs towards meeting their climate, air quality, and public health goals. 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 associated emission 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. These 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). The avoided air pollution due to ENERGY STAR was responsible for an estimated \$7 – 17 billion in public health benefits in 2019 alone. Since 1992, ENERGY STAR has helped reduce 4 billion metric tons in greenhouse gas reductions. Over the lifetime of the program, for every dollar of EPA investment, 3 metric tons of GHGs have been reduced.

## ENERGY STAR and equity

Energy efficiency will be essential in making the clean energy transition affordable, inclusive, and achievable at the scale required to address climate change. The ENERGY STAR program is committed to promoting broader access to energy-saving products and home improvements among disadvantaged households. A key focus of the ENERGY STAR Home Upgrade – an initiative designed to scale up efficient electrification in the residential sector – is to facilitate innovative financing approaches designed to address barriers faced by the most energy burdened. A new web resource educates potential utility investors on one such approach – [Inclusive Utility Investment](#) – as an equitable and mutually beneficial method for deploying energy efficient home upgrades. ENERGY STAR also prioritizes outreach to low-income populations on products that have the greatest opportunity to save energy and dollars, such as lighting, refrigerators, and room air conditioners. The [ENERGY STAR Best Value Finder](#) tool helps consumers find these ENERGY STAR products at the best price. And for products that may be cost-prohibitive, the ENERGY STAR program looks for alternatives such as storm windows as a more affordable alternative to replacement windows. Paired with carefully researched bilingual messaging, utility-sponsored rebates, and geo-targeted advertising to encourage purchases, ENERGY STAR certified products can deliver significant cost savings for low-income families.

ENERGY STAR is also focused on increasing the energy efficiency of newly constructed affordable homes. Roughly 25% of ENERGY STAR builder partners work in the affordable housing space, including 520 Habitat for Humanity affiliates who have constructed more than 19,000 ENERGY STAR certified homes. ENERGY STAR also partners with 85 manufactured housing plants that have built more than 140,000 ENERGY STAR certified manufactured homes. Within the multifamily sector, more than 75 percent of ENERGY STAR multifamily high-rise projects are identified as affordable housing. In addition, ENERGY STAR home certification is used as criteria by more than 20 state government housing finance programs that provide low-income housing tax credits.

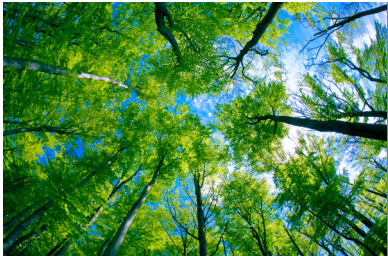
For additional details about ENERGY STAR achievements see [ENERGY STAR Impacts](#).

For ENERGY STAR facts and 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](#).

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# ENERGY STAR® IMPACTS—2021

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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.<sup>1,2</sup>
- 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.<sup>1</sup>
- 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.<sup>1,2</sup>
- Over the life of the program, for every dollar of EPA investment, **3 metric tons** of GHGs have been reduced.<sup>2</sup>
- 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.<sup>2</sup>
- 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.<sup>1</sup>
- More than **90%** of American households recognize the ENERGY STAR.<sup>3</sup>
- 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.<sup>4</sup>
- 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.<sup>5</sup>



## 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.<sup>1,2</sup>
- 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.<sup>3</sup>
- 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.<sup>6</sup>
- **70%** of purchasers would recommend ENERGY STAR products to a friend.<sup>3</sup>

[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.<sup>1,2</sup>
- 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.<sup>1,2</sup>
- 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.<sup>1,2</sup>
- 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.

# About ENERGY STAR® Products – 2021

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## About ENERGY STAR for Products

ENERGY STAR is the simple choice for energy efficiency, making it easy for consumers and businesses to purchase products that save them money and protect the environment. Products that earn the ENERGY STAR label are independently certified to meet strict standards for energy efficiency set by the EPA. It's that integrity that led Americans to purchase more than 300 million ENERGY STAR certified products and more than 300 million ENERGY STAR certified light bulbs in 2020, with a market value of more than \$100 billion. In fact, an average of 800,000 ENERGY STAR certified products was sold every day in 2020, bringing the total to more than 7 billion products sold since 1992.

### The Power of Partnership

Consumers, utilities, and retailers all depend on the ENERGY STAR program to highlight products that deliver real consumer savings and give partners the tools they need to differentiate their efficient products. In 2021, approximately 1,900 manufacturers and 1,200 retailers partnered with ENERGY STAR to make and sell millions of ENERGY STAR certified products across more than 75 residential and commercial product categories. Utilities and retailers also teamed up with ENERGY STAR to coordinate consumer education, leveraging ENERGY STAR materials to provide consistent information to consumers. This includes a focused effort to raise awareness about efficient heat pumps, water heaters, refrigerators, laundry equipment, pool pumps, smart thermostats, and light bulbs.

### Evolving with the Market

As technology improves and markets change, ENERGY STAR evolves to deliver additional savings. For example, the ENERGY STAR® specification for refrigerators was established in 1996 and has been updated multiple times. These updates also helped reduce the average energy consumption of refrigerators while the average volume increased 18% from 1996-2017. [View refrigerators graph](#). The ENERGY STAR specification for clothes washers demonstrated a similar trend with an even greater drop of 30% in energy consumption while the average capacity increased 34% from 2004-2017. [View clothes washers graph](#).

In 2021, EPA updated performance requirements for residential water heaters, central air conditioners and heat pumps, water coolers, and small network equipment. EPA also expanded the types of residential clothes washers and refrigerators, electric vehicle chargers, and imaging equipment that are eligible for certification under ENERGY STAR specifications and updated optional ENERGY STAR connected criteria for pool pumps. More than 3,800 product models from over 220 manufacturers were recognized as "ENERGY STAR Most Efficient," a distinction that recognizes products that deliver cutting-edge energy efficiency along with the latest in technological innovation. Laundry centers and DGX-to-water heat pumps were added as product types eligible for ENERGY STAR Most Efficient recognition.

### Ensuring Program Integrity

In 2020, EPA oversaw robust third-party certification of ENERGY STAR products, administered by more than twenty independent certification bodies and more than 500 labs. EPA also requires that a sample of products is tested directly off retailers' shelves. In 2020, EPA-recognized certification bodies administered post-market verification testing on nearly 2,000 products, resulting in 105 unique disqualifications for a compliance rate of 95%. [Learn more at energystar.gov/integrity](https://energystar.gov/integrity).

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## Program savings

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.

## Spotlight on: Heat Pumps – The Clean Heat (and Cooling) of the Future

As part of the EPA's commitment to decarbonization, ENERGY STAR is emphasizing heat pump technologies, both in terms of increasing acceptance in the residential sector but also contributing to performance improvements. Roughly 25% of home heating equipment unit sales in 2019 were ENERGY STAR certified heat pumps. As carbon emissions associated with electricity generation continue to decline in the U.S., heat pumps present a cleaner and more sustainable choice, with the energy-efficiency potential to significantly offset the growth in electricity demand that is expected with increased electrification. In 2021, EPA introduced ENERGY STAR requirements specific to heat pumps intended for use in cold climates. These new requirements are specially designed to help ensure heat pumps not only save energy at low temperatures but do so while delivering enough heat.



In addition, ENERGY STAR is addressing issues associated with equipment installation and maintenance that can undermine expected energy savings. For instance, equipment that is oversized will use more energy than is needed for a particular home, or it will have to work harder if the airflow is not properly optimized for the size of the air ducts. While these issues have historically been out of the control of equipment manufacturers, ENERGY STAR is incentivizing emerging technology solutions, including variable speed compressors and automatic fault detection and diagnostics.

## Spotlight on: ENERGY STAR Home Upgrade

The [ENERGY STAR Home Upgrade](#) is a set of six high-impact, energy efficiency improvements for your home. These upgrades can also help homeowners transition from fossil fuels to a cleaner, healthier, and more comfortable home. Families can perform the upgrades on a schedule that works for them and as equipment needs to be replaced. The upgrades include:

- An ENERGY STAR certified **air source heat pump** for clean and efficient heating and cooling
- An ENERGY STAR certified **heat pump water heater** for super-efficient hot water
- An ENERGY STAR certified **smart thermostat with** smart climate controls
- High-performing ENERGY STAR certified **windows and storm windows**
- A well-**insulated and sealed attic**
- An **electric vehicle charger**-ready home

The ENERGY STAR program's vast network of partners, including leading product manufacturers, retailers, and utilities, will play a central role making ENERGY STAR Home Upgrades available to American households nationwide. A key

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focus of the ENERGY STAR Home Upgrade is to facilitate innovative financing approaches designed to address barriers faced by the most energy burdened. A new web resource educates potential utility investors on one such approach – [Inclusive Utility Investment](#) – as an equitable and mutually beneficial method for deploying energy efficient home upgrades.

For additional details about ENERGY STAR achievements see [ENERGY STAR Impacts](#).

For ENERGY STAR facts and figures broken down geographically by state, see [ENERGY STAR State Fact Sheets](#).

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# About ENERGY STAR® Homes – 2021

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## About ENERGY STAR for the Residential Sector

In the residential sector, EPA enables and accelerates the adoption of energy efficiency through its ENERGY STAR residential new construction and existing homes programs, initiatives, and resources.

### ENERGY STAR New Construction Programs

ENERGY STAR partners with thousands of home builders and developers, manufactured housing plants, home energy rating companies, and utilities across the U.S. who construct, verify, promote, and incentivize ENERGY STAR certified homes and apartments. Single-family, multifamily, and manufactured (factory-built) homes are all eligible to earn the ENERGY STAR label when independently verified to meet the program's rigorous requirements for energy efficiency. These requirements are customized for each housing type and tailored to the specific climate where the home is built. Today, all of the nation's twenty largest home builders construct ENERGY STAR certified homes. Over 2.3 million ENERGY STAR certified new homes and apartments have been built to-date, with more than 120,000 in 2021 alone. 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. EPA continues to advance its ENERGY STAR Residential New Construction Program requirements as more rigorous building energy codes are developed and adopted by States. [Learn more.](#)

### Existing Homes Resources

ENERGY STAR offers free guidance and resources to educate and empower homeowners with unbiased information from experts about actions they can take to improve home energy efficiency. Consumers rely on ENERGY STAR as their trusted resource for practical information on saving energy, making use of online tools such as the [ENERGY STAR Home Advisor](#) and [Home Energy Yardstick](#). In addition, programs such as [Home Performance with ENERGY STAR](#) and [ENERGY STAR Verified HVAC](#) Installation help homeowners find qualified home improvement contractors in their area that specialize in making homes more energy efficient and comfortable.



### Program Savings

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.

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## Spotlight on: Transition of National Program Requirements

To keep pace with advancing building codes and further reduce emissions associated with the residential new construction sector, EPA has established a transition schedule to advance the minimum program requirements in states where ENERGY STAR Single-Family New Homes Version 3.0 and Multifamily New Construction Version 1.0 are still in effect to ENERGY STAR Single-Family New Homes Version 3.1 and Multifamily New Construction Version 1.1, respectively. This transition will help homeowners save over 800 million additional kilowatt-hours of electricity and achieve nearly 1 million metric tons of greenhouse gas reductions over the next five years.

In states where STAR Single-Family New Homes Version 3.0 and Multifamily New Construction Version 1.0 are still in effect, the following transition timeline has been established:

- Single-family homes permitted on or after **January 1, 2023**, will be required to use Version 3.1 of the National ENERGY STAR Single-Family New Homes program requirements.
- Multifamily buildings permitted on or after **January 1, 2024**, will be required to use Version 1.1 of the National ENERGY STAR Multifamily New Construction (MFNC) program requirements.

## Spotlight on: Affordable New Construction

ENERGY STAR is also focused on increasing the energy efficiency of newly constructed affordable homes. Roughly 25% of ENERGY STAR builder partners work in the affordable housing space, including 520 Habitat for Humanity affiliates who have constructed more than 19,000 ENERGY STAR certified homes. ENERGY STAR also partners with 85 manufactured housing plants that have built more than 140,000 ENERGY STAR certified manufactured homes. Within the multifamily sector, more than 75 percent of ENERGY STAR multifamily high-rise projects are identified as affordable housing. In addition, ENERGY STAR home certification is used as criteria by more than 20 state government housing finance programs that provide low-income housing tax credits.

For additional details about ENERGY STAR achievements see [ENERGY STAR Impacts](#).

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# About ENERGY STAR® Buildings – 2021

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## About ENERGY STAR Buildings

Businesses embrace ENERGY STAR for the same reasons that consumers do: it's a widely recognized symbol of energy efficiency, translating technical details into simple, credible, and actionable information. ENERGY STAR tools and resources help businesses determine the most cost-effective approach to managing energy use in their buildings and plants—enabling the private sector to save energy, increase profits, and boost competitiveness. Thousands of diverse organizations across the nation—from Fortune 100® companies and major league sports teams to school districts and small businesses— have partnered with EPA to improve their facilities' energy performance.

## Portfolio Manager and the 1 – 100 ENERGY STAR score

Commercial buildings have embraced EPA's energy measurement and tracking tool, [ENERGY STAR Portfolio Manager](#). In fact, 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. Owners of commercial buildings and industrial plants have also adopted EPA's 1 – 100 ENERGY STAR score as the industry standard for measuring energy performance. Over the past five years, the number of buildings actively using Portfolio Manager to benchmark their energy performance increased by more than 30%, while the amount of commercial building square footage actively benchmarked grew by more than 40% over that same time. [Learn more.](#)

## The value of ENERGY STAR certification for buildings

In 2021 more than 6,000 buildings earned EPA's ENERGY STAR certification, bringing the total to over 39,000. Buildings that earn the ENERGY STAR use, on average, 35% less energy than their peers. For commercial real estate, ENERGY STAR is a market differentiator. Real estate companies use EPA's 1 – 100 ENERGY STAR score to demonstrate their sustainability to investors through reporting frameworks such as the Global Real Estate Sustainability Benchmark (GRESB) and the Sustainability Accounting Standards Board (SASB). Multifamily property owners use it to access discounted financing through products offered by Fannie Mae, Freddie Mac, and the U.S. Department of Housing and Urban Development.

## Program savings

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.

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## Spotlight on: state and local benchmarking and building performance standards

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 building energy benchmarking requirements, creating uniformity for businesses, and reducing transaction and implementation costs. Combined, these requirements apply to over 125,000 buildings, representing over 15 billion square feet. In addition, ENERGY STAR is helping several jurisdictions design and implement building performance standards aimed at achieving significant GHG and energy reductions. EPA published a white paper that presents the many metrics options and offers analysis and guidance on the choice of metrics. [Learn more.](#)



## Spotlight on: ENERGY STAR Tenant Space and Samsung

EPA launched ENERGY STAR Tenant Space in 2020, offering tenants an opportunity to earn recognition for energy efficient office spaces. This recognition requires that tenants meet energy efficient design criteria and provides the opportunity for tenant-landlord collaboration around energy efficiency, leading to more efficient tenant spaces and whole buildings.

Samsung Electronics was one of the first tenants to earn ENERGY STAR Tenant Space recognition for its office at 700 Pennsylvania Avenue, SE in Washington, DC, and continues to pursue recognition for its offices across the country, totaling six spaces through 2021 with plans to expand. Samsung believes that achieving recognition helps to drive awareness of ENERGY STAR among its employees and the importance of Samsung's continued energy-efficiency efforts through its products and operations.

For additional details about ENERGY STAR achievements see [ENERGY STAR Impacts.](#)

For ENERGY STAR facts and 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.](#)



# About ENERGY STAR® Industrial – 2021

The simple  
choice for  
energy  
efficiency.



Published April 2022

## About ENERGY STAR for Industrial Plants

American manufacturers have embraced ENERGY STAR to build successful energy programs, engage in and learn through its vibrant peer networks, and improve their facilities' energy performance. Hundreds of companies have deployed ENERGY STAR strategic energy management (SEM) resources, such as the [Guidelines for Energy Management](#), to foster an organizational culture focused on continuous improvement of energy performance.

To help specific industrial sectors become more energy efficient, EPA has convened [33 "Industrial Sector Focuses"](#) to foster collaboration and develop industry-specific tools and resources. These sectors span the U.S. economy—from cookie and cracker bakeries and pharmaceutical plants to integrated steel mills and petroleum refineries. Unique products of an Industrial Focus include a plant Energy Performance Indicator (see below) and an Energy Guide that documents effective energy efficiency measures for the sector. To date, [19 Energy Guides have been published](#).

## Plants Achieve ENERGY STAR Certification and Reductions

Popular ENERGY STAR tools for the industrial sector include plant [Energy Performance Indicators \(EPIs\)](#), which quantitatively evaluate how energy-efficient a plant is and provide companies with the information they need to make smart investment decisions. EPA provides ENERGY STAR certification for twenty types of manufacturing plants, and 90 plants earned ENERGY STAR certification for superior energy performance in 2021.

In addition, 28 industrial plants achieved energy use intensity reductions in 2021 in the [ENERGY STAR Challenge for Industry campaign](#), in which industrial sites commit to reducing their energy intensity by 10% within five years. Also, 103 plants registered baseline energy use intensity with the Challenge for Industry in 2021.

## Program Savings

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.

For additional details about ENERGY STAR achievements see [ENERGY STAR Impacts](#).

## Spotlight On: Building an Energy and Decarbonization Strategy with ENERGY STAR: Bimbo Bakeries USA Inc.

Bimbo Bakeries USA Inc. (BBU) is one of the largest commercial baked goods companies in United States whose products include Thomas English Muffins, Earthgrains breads, Sara Lee cakes, and Entenmann's pastries. BBU's initial involvement with ENERGY STAR began in the Industrial Focus for Bakeries, an initiative that developed a set of energy

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efficiency tools for the industry. Experiencing the value of the ENERGY STAR industrial network, BBU became one of the first baking companies to join the ENERGY STAR partnership in 2013.

Initially, the company did not have a formal corporate energy program but understood the importance energy management would play in the company's new sustainability strategy. After becoming a partner, BBU took advantage of the energy management resources, support and networking with other Partner companies offered by ENERGY STAR to build a world-class energy program. Since joining, the company has earned ENERGY STAR certification for 18 of the company's bakeries, achieved the ENERGY STAR Challenge for Industry at 7 bakeries, and has been awarded ENERGY STAR Partner of the Year for Energy Management in 2018 and 2019 and Partner of the Year: Sustained Excellence annually from 2020 to 2022.

Recently, to do its part to address climate change, BBU set aggressive greenhouse gas (GHG) reduction goals. A corner stone of BBU's decarbonization strategy for achieving these goals is increasing the energy efficiency of operations and using tools and resources from ENERGY STAR. For BBU and many other manufacturers, increasing energy efficiency is the most cost-effective way to reduce scope 1 and 2 GHG emissions. According to a [recent study](#) supported by ENERGY STAR, an 86% reduction in industrial GHG emissions by 2050 is technically feasible; energy efficiency is expected to contribute up to 34% of this reduction. BBU, along with many other companies, is now working with ENERGY STAR to identify ways to enhance energy efficiency further to drive industrial emission reductions.

For additional details about ENERGY STAR achievements see [ENERGY STAR Impacts](#).

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