# About ENERGY STAR® - 2017

The simple choice for energy efficiency.

Published April 2018

## ENERGY STAR Overview

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 more than 40 percent of the Fortune 500®—rely on their partnership with the U.S. Environmental Protection Agency (EPA) to deliver cost-saving energy efficiency solutions. Ninety-percent of American households recognize the ENERGY STAR, making it one of the most widely recognized consumer symbols in the nation. Together, since 1992, ENERGY STAR and its partners have helped save American families and businesses more than $450 billion and over 3.5 trillion kilowatt-hours of electricity while also achieving broad emissions reductions—all through voluntary action.

## 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 quality, 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 2016, with a market value of more than $100 billion. In fact, an average of 800,000 ENERGY STAR certified products were sold every day in 2016, bringing the total to more than 5.8 billion products sold since 1992. Learn more about ENERGY STAR products.

## DID YOU KNOW?

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

One out of every 10 homes built in 2017 earned EPA's ENERGY STAR certification.

**31 different industrial sectors**—from bakeries and pharmaceutical plants to steel mills and petroleum refineries–work with ENERGY STAR to manage their energy use.

Americans purchased ENERGY STAR certified products in 2016 with a market value of more than **$100 billion.**

## ENERGY STAR for businesses and organizations

ENERGY STAR tools and resources help businesses determine 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, and offices, 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®, has been used to measure and track the energy performance of hundreds of thousands of commercial buildings 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. Studies find that ENERGY STAR certified buildings command a premium of up to 16 percent for sales prices and rental rates. Learn more about ENERGY STAR for commercial buildings and industrial plants.

## ENERGY STAR for homes

ENERGY STAR certified homes are at least 10% more energy efficient than homes built to code and achieve a 20% improvement on average, while providing homeowners with better quality, performance, and comfort. And homebuyers have more energy-efficient homes to choose from than ever before: nearly ninety percent of the nation's largest homebuilders build ENERGY STAR Certified New Homes, helping to bring the total to more than 1.9 million homes built as of 2017. Additionally, in 2017, 91,000 homeowners retrofitted their existing homes for improved energy efficiency through the Home Performance with ENERGY STAR program. Learn more about ENERGY STAR for homes.

## Utilities and local governments rely on ENERGY STAR

Nationwide, utilities invested $7.7 billion in energy efficiency programs in 2015. With hundreds of disparate 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 700 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 2017, 26 local governments and two states rely on EPA's ENERGY STAR Portfolio Manager® tool as the foundation for their energy benchmarking and transparency policies, creating uniformity for businesses and reducing transaction and implementation costs.

## DID YOU KNOW?

More than 700 utilities, state and local governments, and nonprofits partner with ENERGY STAR to reach roughly **95% of American households.**

**Hundreds of thousands of commercial properties use EPA's ENERGY STAR Portfolio Manager® tool to track their energy and water consumption.**

The first 23 smart thermostats models earned the ENERGY STAR certification in 2017.

**290,000 American workers** are involved in the manufacture of ENERGY STAR certified products and building materials.

## ENERGY STAR and the economy

ENERGY STAR fosters economic development, greater competitiveness, and a healthy environment. ENERGY STAR certified products, homes, buildings, and plants helped save Americans families and businesses nearly 400 billion kWh of electricity and over $30 billion on their energy costs in 2016 alone. Moreover, by increasing energy efficiency, ENERGY STAR is supporting U.S. energy security and helping improve the reliability of the electricity grid.

Additionally, according to the U.S. Energy and Employment Report for 2016, 290,000 American workers are involved in the manufacture of ENERGY STAR certified products and building materials. The report also projects that employment in energy efficiency will grow much faster than other areas of the energy sector—9 percent in 2017 vs. average projected growth of 5 percent across the entire energy sector—and ENERGY STAR is an integral part of that market.

## ENERGY STAR and the environment

ENERGY STAR contributes to improved environmental quality and public health. Through voluntary action, ENERGY STAR provides states and local governments with more flexibility and reduced costs towards meeting their air quality requirements and their health and environmental goals. In 2016 alone, ENERGY STAR helped Americans save approximately 400 billion kWh of electricity with associated emission reductions of 320 million metric tons of greenhouse gas emissions, 300,000 short tons of sulfur dioxide, 220,000 short tons of nitrogen oxides, and 23,000 short tons of fine particulate matter ($PM_{2.5}$). Since 1992, ENERGY STAR associated greenhouse gas reductions have reached 3.1 billion metric tons.

For additional details about ENERGY STAR achievements see energystar.gov/numbers.

# ENERGY STAR® BY THE NUMBERS - 2017

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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 more than 40 percent of the Fortune 500®—rely on their partnership with the U.S. Environmental Protection Agency (EPA) to deliver cost-saving energy efficiency solutions through voluntary action.

## Program-wide facts

- Since 1992, ENERGY STAR and its partners have saved American families and businesses more than **$450 billion** in energy costs and over 3.5 trillion kWh of electricity, while achieving broad emissions reductions.[1]
- In 2016 alone, ENERGY STAR helped Americans save over **$30 billion** in energy costs, approximately 400 billion kWh of electricity, and associated emission reductions of 320 million metric tons of greenhouse gas emissions, 300,000 short tons of sulfur dioxide, 220,000 short tons of nitrogen oxides, and 23,000 short tons of fine particulate matter ($PM_{2.5}$). Since 1992, ENERGY STAR associated greenhouse gas reductions have reached 3.1 billion metric tons.[1,2]
- More than **90%** of American households recognize the ENERGY STAR.[3]
- More than **700** 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 $7.7 billion in energy efficiency programs in 2015.[4]
- Nearly **290,000** American workers are involved in the manufacture of ENERGY STAR certified products and building materials, as of 2016. Employment in energy efficiency is also projected to grow much faster than other areas of the energy sector—9 percent in 2017 vs. average projected growth of 5 percent across the entire energy sector—and ENERGY STAR is an integral part of that market.[5]

## ENERGY STAR products

- ENERGY STAR certified products helped consumers save **$20 billion** in energy costs in 2016, contributing to cumulative energy cost savings of over **$280 billion** since 1992.[1]
- Americans purchased more than 300 million ENERGY STAR certified products and more than **300 million** ENERGY STAR certified lightbulbs in 2016, for cumulative totals exceeding 5.8 billion products and 3.8 billion light bulbs, respectively.
- 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 **60,000** product models have earned the ENERGY STAR based on these rigorous criteria.
- More than **2,200** product models from more than 140 manufacturers were recognized as "ENERGY STAR Most Efficient" in 2017.

- By choosing ENERGY STAR, a typical household can save about **$575** on their energy bills and still enjoy the quality and performance they expect.[6]
- About **three-fourths** of U.S. households report the ENERGY STAR label as influential in their purchasing decisions.[3]
- **80%** of purchasers would recommend ENERGY STAR products to a friend.[3]

## ENERGY STAR for commercial buildings

- The ENERGY STAR program for commercial buildings helped businesses and organizations save nearly **$10 billion** in energy costs in 2016, contributing to cumulative energy cost savings of over **$150 billion** since 1992.[1]
- **Hundreds of thousands** of commercial properties use EPA's ENERGY STAR Portfolio Manager® tool to measure, track, assess, and report on their energy and water consumption.
- More than **9,500** buildings earned the ENERGY STAR in 2017, bringing the total to more than 32,000.
- On average, ENERGY STAR certified buildings use **35%** less energy than typical buildings nationwide.
- Studies find that ENERGY STAR certified buildings command a premium of up to 16 percent for sales prices and rental rates.[7]
- As of the end of 2017, **26** local governments and **two** states rely on EPA's ENERGY STAR Portfolio Manager® tool as the foundation for their energy benchmarking and transparency policies.

## ENERGY STAR for industrial plants

- The ENERGY STAR program for industrial plants helped businesses save **$1.4 billion** in energy costs in 2016, contributing to cumulative energy cost savings of $42 billion since 1992.[1]
- As of 2017, **31** 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.
- **93** industrial plants earned the ENERGY STAR in 2017.
- **38** industrial plants achieved energy intensity reductions in the 2017 ENERGY STAR Challenge for Industry campaign.

## ENERGY STAR for new and existing homes

- The ENERGY STAR certified new homes program helped homeowners save **$360 million** in energy costs in 2016, contributing to cumulative energy cost savings of **$3.1 billion** since 1995.[1]
- Morethan **103,000** ENERGY STAR certified single-family homes and multifamily units were built in 2017 alone, for a total of nearly 1.9 million since 1995.
- As of 2017, nearly **90%** of the nation's top homebuilders build ENERGY STAR certified homes.
- **One out of every 10** homes built in 2017 was ENERGY STAR certified.
- ENERGY STAR certified homes are at least 10% more energy efficient than homes built to code and achieve a 20% improvement on average, while providing homeowners with better quality, performance, and comfort.
- Home Performance with ENERGY STAR partners completed **91,000** energy efficiency improvement projects on existing homes in 2017.

## References

The majority of data cited is from 2017. In cases where 2017 data is not yet available, 2016 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 emission 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. (2017). *National Awareness of ENERGY STAR® for 2016: Analysis of 2016 CEE Household Survey*. http://energystar.gov/awareness.
4. ACEEE. (2016). The 2016 State Energy Efficiency Scorecard. http://aceee.org/research-report/u1606.
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6. Lawrence Berkeley National Laboratory. (2016). Typical House Estimates. Prepared for EPA Office of Air and Radiation, Climate Protection Partnerships Division.
7. Boston Green Ribbon Commission. (2012). Benchmarking and Disclosure: Lessons from Leading Cities, Boston Green Ribbon Commission. https://www.abettercity.org/docs/06.2012%20-%20Benchmarking%20report%20-%20Final.pdf (link is external) (PDF, 1.3 MB).


For more information on our calculation methods, see the Technical Notes. (PDF, 110 KB)

# About **ENERGY STAR®** Products – 2017

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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. EPA ensures that each product that earns the label is independently certified to deliver the quality, 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 2016, with a market value of more than $100 billion. In fact, an average of 800,000 ENERGY STAR certified products were sold every day in 2016, bringing the total to more than 5.8 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 2017, more than 2000 manufacturers and 2000 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 on consumer education, leveraging ENERGY STAR materials to provide consistent information to consumers, including a focused effort in 2017 to raise awareness about more efficient refrigerators, air conditioners, laundry equipment, pool pumps, water heaters, smart thermostats and light bulbs.

### Evolving with the market

As technology improves and industries change, ENERGY STAR evolves with the market to deliver continued savings. For example, in 2017, EPA updated performance requirements for five product categories including commercial ice machines, clothes washers, ceiling fans, uninterruptible power supplies and commercial water heaters. Nineteen additions and revisions to the product categories are currently underway. In 2017, more than 2,200 product models from more than 140 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. Dehumidifiers were added to the product categories eligible for recognition.

### Ensuring program integrity

In 2017, EPA oversaw robust third-party certification of ENERGY STAR products, administered by 23 independent certification bodies and more than 600 labs. EPA also requires that a sample of products be tested directly off retailers' shelves. In 2017, EPA-recognized certification bodies administered post-market verification testing on more than 1,700 products, resulting in 115 unique disqualifications for a compliance rate of 93%, affirming consumer confidence in the label. In fact, 80 percent of purchasers would recommend ENERGY STAR products to a friend. Learn more at energystar.gov/integrity.

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## Program savings

ENERGY STAR certified products helped consumers save $20 billion in energy costs in 2016, contributing to cumulative energy cost savings of over $280 billion since 1992.

### Spotlight on: enhanced oversight of CFLs pays off

Five years ago, EPA began sending letters to CFL original equipment manufacturers (OEMs) containing their ENERGY STAR verification testing performance for the year, compared to average. The letters ensured that poor performing OEMs that supplied products associated with the ENERGY STAR label were aware of their performance issues.

At the same time, EPA encouraged CFL private labelers to review their OEM's performance and institute improved quality control as warranted. Companies offering CFLs that failed verification testing were subject to heightened control measures if the OEM of the failed model was among those with poor performance records.

In response to this market pressure, overall disqualification rates decreased by nearly half. Four out of five of the worst-performing OEMs exited the ENERGY STAR market. Given the success of these efforts in reducing the rate of product disqualification, EPA is continuing this approach for ENERGY STAR certified LED light bulbs.

For additional details about ENERGY STAR achievements see energystar.gov/numbers

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## About ENERGY STAR for the Residential Sector

In the residential sector, ENERGY STAR enables and accelerates the deployment and integration of energy efficiency through its ENERGY STAR Certified New Homes program and its existing homes programs, initiatives, and resources.

### ENERGY STAR certified new homes program

ENERGY STAR partners with thousands of homebuilders and developers, home energy raters, and utilities across the U.S. who construct, verify, promote, and incentivize ENERGY STAR certified homes. Homes that are eligible to earn the ENERGY STAR label include single family, multifamily, and manufactured (factory-built) housing. Today, nearly ninety percent of the nation's largest homebuilders construct ENERGY STAR certified homes. Homebuyers have more energy-efficient homes to choose from than ever before. More than 100,000 ENERGY STAR certified single-family homes and multifamily units were built in 2017 alone, for a total of nearly 1.9 million since 1995.

ENERGY STAR certified homes are at least 10% more energy efficient than homes built to code and achieve a 20% improvement on average, while providing homeowners with better quality, performance, and comfort. EPA continues to advance its ENERGY STAR residential new construction program requirements as more rigorous energy codes are developed and adopted by States. Learn more.

### Existing homes programs

Consumers rely on ENERGY STAR as their trusted resource for practical information on saving energy. In 2017, American consumers visited the ENERGY STAR website more than 7.5 million times to learn how to reduce their energy bills, making use of popular tools such as the ENERGY STAR Home Advisor and the Home Energy Yardstick. ENERGY STAR offers free online tools and resources to educate and empower homeowners with unbiased information from experts about actions they can take to improve their home's energy efficiency. In addition, programs such as Home Performance with ENERGY STAR and ENERGY STAR Verified HVAC Installation help homeowners find qualified participating contractors in their area.

### Program savings

EPA's The ENERGY STAR Certified New Homes program helped homeowners save $360 million in energy costs in 2016, contributing to cumulative energy cost savings of $3.1 billion since 1992.

### Spotlight on: Habitat for Humanity

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Since 1997, over 600 Habitat for Humanity affiliates across the U.S. have constructed a total of more than 16,000 ENERGY STAR certified new homes for families seeking to own homes that are energy-efficient, comfortable, and truly affordable. Three Habitat affiliates have been recognized by EPA for their long-standing commitment to building ENERGY STAR certified homes (Habitat for Humanity of Greater Nashville, Habitat for Humanity of Metro Denver, and Houston Habitat for Humanity).

## Spotlight on: certified apartments and condos

Apartments and condos that earn the ENERGY STAR label are designed and verified to be at least 15% more energy efficient than buildings constructed using standard building practices. These buildings combine an integrated approach to design with tried-and-true best practices for construction and include ENERGY STAR certified refrigerators, dishwashers, clothes washers, and ceiling fans (when these appliances are provided), as well as low-flow water fixtures that reduce water consumption. They also undergo a series of third-party inspections and testing by licensed engineers and architects to ensure they perform as designed. In 2017 alone, more than 17,000 multifamily low- and high-rise units earned the ENERGY STAR, bringing the total number of certified units to nearly 170,000. Learn more.

For additional details about ENERGY STAR achievements see energystar.gov/numbers

# About **ENERGY STAR®** Buildings – 2017

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## About ENERGY STAR for Commercial 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 strengthen their 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, hundreds of thousands of commercial properties use ENERGY STAR Portfolio Manager to measure and track their energy performance. 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.

### The value of ENERGY STAR certification for buildings

In 2017, more than 9,500 commercial buildings earned the ENERGY STAR, bringing the total to more than 32,000. Buildings that earn the ENERGY STAR use, on average, 35 percent less energy than their peers. For commercial real estate, ENERGY STAR is a market differentiator. Studies find that ENERGY STAR certified buildings command a premium of up to 16 percent for sales prices and rental rates. 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) and 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.

### ENERGY STAR as a resource

Businesses and organizations also rely on ENERGY STAR as their trusted resource for practical information on saving energy. In 2017, American consumers and businesses visited the ENERGY STAR website more than 7.5 million times to learn how to reduce their energy costs, making use of popular tools such as ENERGY STAR Portfolio Manager®.

### Program savings

Together, the ENERGY STAR program for commercial buildings helped businesses and organizations save $10 billion in energy costs in 2016, contributing to cumulative energy cost savings of $150 billion since 1992.

# About **ENERGY STAR®** Buildings – 2017

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## Spotlight on: state and local benchmarking initiatives

As of the end of 2017, 26 local governments and two states 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 approximately 100,000 buildings, representing more than 10.8 billion square feet.

Additional local governments and states have required ENERGY STAR Portfolio Manager in the benchmarking of their own facilities. Learn more.

## Spotlight on: Texas A&M University

With a campus of more than 20 million square feet to manage, the energy team at Texas A&M University has to be strategic about where to invest. Working with ENERGY STAR, the team used Portfolio Manager to identify the 10 buildings with the highest energy consumption and the greatest room for improvement.

The team completed a full lighting retrofit, installed occupancy sensors and a pump variable frequency drive, and upgraded the building automation system. By knowing where to focus their improvements, Texas A&M was able to maximize their savings—$912,000 in a single year.

For additional details about ENERGY STAR achievements see energystar.gov/numbers

# About **ENERGY STAR®** Plants – 2017

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## About ENERGY STAR for Industrial Plants

American manufacturers have embraced ENERGY STAR as a means to build successful energy programs, engage in vibrant peer networks, and improve their facilities' energy performance. EPA currently works with 31 industrial sectors 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.

### Plants achieve ENERGY STAR certification and reductions

Popular tools include energy performance indicators, which provide companies with the information they need to make smart investment decisions. ENERGY STAR provides industry-specific energy performance indicators for 17 different types of manufacturing plants, and 93 plants earned the ENERGY STAR for superior energy performance in 2017.

In addition, 38 industrial plants achieved energy use intensity reductions in the 2017 ENERGY STAR Challenge for Industry campaign, in which industrial sites commit to reducing their energy intensity by 10 percent within five years.

### Program savings

Together, the ENERGY STAR program for industrial plants helped businesses save $1.4 billion in energy costs in 2016, contributing to cumulative energy cost savings of $42 billion since 1992.

For additional details about ENERGY STAR achievements see energystar.gov/numbers