

With continuous efficiency improvements, we are reducing the energy consumption of our devices and helping our customers live more sustainably.

Product Energy Efficiency

Product Efficiency Impact

Samsung has a long history of developing energy-efficient products. In the 1970s, our Econo TV reduced energy consumption by over 20%. As of 2024, we have improved the energy efficiency of seven major product categories to consume 31.5% less energy in comparison to 2019 performance - surpassing our goal of 30% by 2030.

Our Pledge for Greater Energy Efficiency (2019 baseline)

31.5%

Our major consumer products are 31.5% more energy-efficient

20%

By 2025, our mobile memory products will be 20% more energy-efficient

60%

By 2025, our data center memory products will be 60% more energy-efficient

Source: <https://news.samsung.com/global/samsung-electronics-announces-new-environmental-strategy>

Our goals are to reduce carbon emissions (Scope 1 and 2) by 2030 for DX and 2050 for DS and 100% renewable energy transition for DX business sites by 2030 and DS business sites by 2050.

DX 2024 Progress

- Achieved Scope 1 and 2 emissions of 340k tonnes of CO₂
- Achieved renewable energy transition rate of 93.4%

DS 2024 Progress

- Achieved Scope 1 and 2 emissions of: 14.55 million tonnes CO₂
- Achieved renewable energy transition rate of 24.8%
- Develop high efficiency Regenerative Catalytic System (RCS)

*Products included in calculation: smartphones, TVs, refrigerators, washing machines, air conditioners, PCs, and monitors.

**"Major" is defined by DX as smartphones, TVs, refrigerators, washing machines, air conditioners, PCs, and monitors.

ENERGY STAR

According to the EPA, choosing ENERGY STAR can save a typical household about **\$450** on their energy bills each year – all while enjoying the same quality and performance they expect. Since 1992, ENERGY STAR and its partners have helped prevent **four billion** metric tons of greenhouse gas emissions from entering our atmosphere.

As of 2025, Samsung has over 630+ ENERGY STAR certified base models across our entire product portfolio.

70% of active lineup are ENERGY STAR certified within ENERGY STAR qualifying categories and subcategories.

29%

of built-in
cooktops

91%

of refrigerators

55%

of ranges
(electric only*)

95%

of dishwashers

49%

of washer/
dryer combos

100%

of all washers from our
South Carolina facility

We are the first major brand to rejoin the ENERGY STAR TV Category with 50 models earning the certification as of 2025.

We are the only company in the past 10 years to receive the ENERGY STAR Corporate Commitment Award.

Source: www.energystar.gov/productfinder/product/certified-televisions/results for other brands/offerings

*Induction is included in electric

Bespoke AI Slide-In Induction Range ENERGY STAR certified

In 2024, 11 new induction cooking products – one induction cooktop and 10 induction ranges – **were certified to the brand new ENERGY STAR specification for residential electric cooking products.** This includes Samsung's innovative, energy-efficient induction range, the Bespoke AI Slide-In Induction Range.

In 2021, Samsung's Smart Induction Cooktop was the **first cooktop in the industry to be recognized with the EPA Emerging Technology Award** for its ability to reduce energy use and lower emissions – all while maintaining outstanding performance. Samsung has more models that have won this award than any other company.

Bespoke AI Hybrid 4-Door Flex Refrigerator ENERGY STAR certified

AI Energy Mode Integration: Through SmartThings Energy App, users can activate AI Energy Mode to enact consumption pattern data to optimize compressor and defrost cycles.

The high-efficiency AI Inverter Compressor and a Peltier module reduces internal temperature fluctuation in the fridge when activated. The fridge leverages the residual heat from the Peltier mode during the defrosting process, reducing the chance of excessive temperature fluctuations throughout the cooling and heating cycle.

High Efficiency LED Lighting: Reduces energy usage while providing bright internal illumination.

Low Global Warming Potential (GP) Refrigerant: Uses R600a refrigerant, which is a very efficient refrigerant with low discharge temperatures.

Bespoke AI Laundry Vented Combo ENERGY STAR certified

Industry's first vented all-in-one washer-dryer in its class.

SmartThings Energy: Allows consumers to monitor power consumption and estimate their monthly electricity bill for improved control over their energy usage.

AI Energy Mode: Deploys Vented Combo to automatically optimize energy consumption and reduce usage by up to 30%.

Flex Auto Dispense System: Automatically dispenses the ideal amount of detergent and fabric softener for every load, for up to 47 loads
Less Microfiber cycle: This cycle allows users to gently clean synthetic textiles while reducing 39% of microfibers released into the ocean.

IRA Home Rebates for ENERGY STAR certified Products

In 2025, we continue to be a major supporter of the [Inflation Reduction Act \(IRA\) home rebate programs and advocate for greater access to ENERGY STAR products](#) – especially for low and moderate income households.

Once states apply for and receive funding to launch these programs, customers can save up to \$840 on new appliances depending on two factors: the rebate amount set by their state and the customer's income level. The latter must be less than 150% of area median income – as defined by the U.S. Department of Housing and Urban Development – to qualify.

Samsung is committed to advancing these voluntary solutions, benefiting American consumers and reinforcing their choice.

Recognition

From our products to operations, Samsung has won many accolades that recognize our efforts to scale up energy efficiency and reduce greenhouse gas emissions. In 2024, we celebrated our 11th year winning the **ENERGY STAR Partner of the Year** award for Sustained Excellence in the Product Brand Owner category and our 2nd year winning the **ENERGY STAR Partner of the Year** award for Sustained Excellence for Energy Management. We continue to protect the environment through our efforts to increase the energy efficiency of our products and reduce emissions in our operations.

27

ENERGY STAR Awards
since 2009

20X

ENERGY STAR
Partner of the Year

4X

Winner of the ENERGY STAR
Emerging Technology Award

Samsung Electronics Canada

Samsung is one of the world's leading electronics companies, focused on innovation in consumer products, including digital appliances, televisions, monitors, smartphones, tablets and wearable devices. Since 2003, Samsung is dedicated to making meaningful contributions to fight climate change by developing more energy efficient products through the ENERGY STAR program.

Key accomplishments include:

- In 2025, we won the ENERGY STAR Canada Manufacturer of the Year Award for Appliances, which is Samsung Electronics Canada's fifteenth ENERGY STAR Canada award.
- Expanded their certified product offerings in Canada, with 100% of dishwashers and front-load washers, 81% of refrigerators, 60% of top-load washers, and 49% of dryers now ENERGY STAR certified. A total of 170 ENERGY STAR certified models are now on the market, up from 156 in 2023.
- Amplified ENERGY STAR initiatives via social media channels, including participation in the 12 Days of ENERGY STAR campaign, ENERGY STAR Day, ENERGY STAR Awards, and an ENERGY STAR promotional offer on Earth Day.
- Partnered with influencers to promote ENERGY STAR certified appliances, gaining 100 million impressions across social media platforms.
- Highlighted ENERGY STAR certified appliances at national retailer partner stores across Canada with in-store materials.
- Continued promotion of ENERGY STAR on the [samsung.ca](https://www.samsung.ca) website, including native filters, certification logos on applicable product pages, category banners and ENERGY STAR promotions.

Efficiency Through Innovation

Solar-cell remote

- Avoids waste from single-use batteries, it is projected to avoid the use of up to 99 million disposable batteries over a 7-year period.
- Designed with recycled materials to help reduce the environmental impact, using 24% recycled polyethylene terephthalate (PET).
- Runs on about 10% of the power that typical remote controls use, contributing to additional energy savings.

Improvement of energy efficiency

The SolarCell Remote offers vastly improved energy efficiency as it can be powered by indoor lights. Based on users' TV watching patterns, the number of times they push the remote control's buttons, and the time spent using the remote control, the power consumption of the SolarCell Remote per day is 88%* less than that of our 2020 remote controls.

Phone chargers

- Our S25 15W charger, released in 2025, has a standby power consumption under 0.005W
- Our goal is to reduce standby to less than 0.005W by the end of 2025 for all our phone chargers, on our way toward zero

OptiWash AI technology

- Reduces water and energy consumption in washing machines
- Determines the ideal amount of water and detergent per cycle

Partnerships

patagonia®

We partnered with Patagonia to decrease marine pollution. We developed the Less Microfiber Cycle which reduces microplastic discharge from fabrics by 54%, and an add-on filter preventing up to 98% of microplastics released during laundry cycles.

BEST BUY

We partner with Best Buy to offer promotions and incentives that encourage customers to purchase ENERGY STAR-certified products.

Walmart ✱

Given our advancements in product energy efficiency, we are a major contributor to Walmart's Project Gigaton, which aims to cut one billion metric tons (a gigaton) of greenhouse gasses by 2030.



SmartThings

SmartThings AI Energy Mode

Artificial Intelligence (AI) Energy Mode is an innovative feature within SmartThings Energy that can save consumers energy on select products and cycles.

AI Energy Mode learns your routines and automatically adjusts your devices to save energy. Using machine learning, it recognizes when your energy use goes beyond your targets set in SmartThings Energy. Plus, it gives you insights into why it happened.

Additional features like Optimal Charging and Optimal Scheduling go beyond AI Energy Mode to help users save energy – all available in SmartThings Energy.

SmartThings Flex Connect (DR) Program

The Flex Connect program is a DR program that gives California and New York SmartThings Energy users another way to save energy at peak demand times. Eligible users can now leverage their devices in the program to save energy and earn Samsung Rewards.

Users have the flexibility to automate a large variety of loads like plugs, AC, lights, TVs, and appliances in Flex Connect. The program automates leveraged devices to participate in an event when a Demand Response (DR) signal is received, like when extreme weather causes electricity demand to surge. Reduced demand on the energy grid helps balance and stabilize the supply and demand of energy.

Energy Rewards

Saving energy can be even more fun with SmartThings Energy Rewards. Users can now experience gamified elements, including reaching new Energy Levels, based on energy savings obtained in the home through things like AI Energy Mode.

When users save energy efficiently, they can receive an Energy Stamp. This can be converted into Samsung Rewards and used to purchase products on our website. Users can earn one Energy Stamp per day for every 400Wh of electricity saved, which can be converted to a total of 20 Samsung Rewards Points.

SmartThings Partnership with Electricity Maps

Established in 2023, this partnership helps inform SmartThings users via API integration by providing real-time historical and forecasted data on their carbon emissions based on home electricity usage.

The integration allowed for the launch of pivotal features within SmartThings Energy, like Optimal Charging, Optimal Scheduling, and AI Energy Mode.

Innovative Ways SmartThings Saves Energy

Leveraging Machine Learning with SmartThings Energy AI Mode

Set energy use targets and our model will identify when use exceeds that threshold.

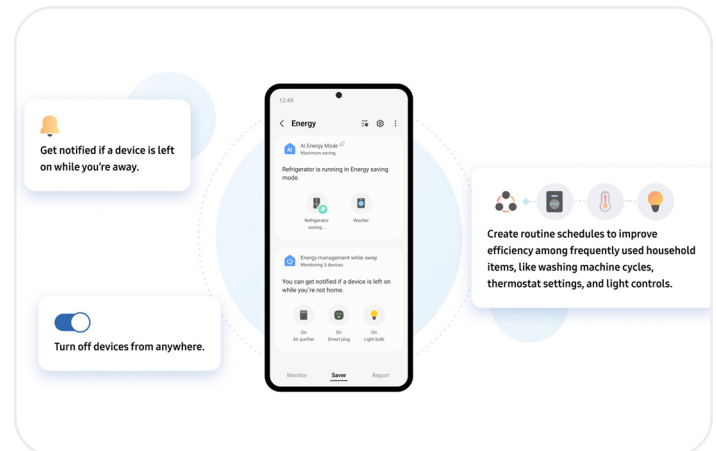
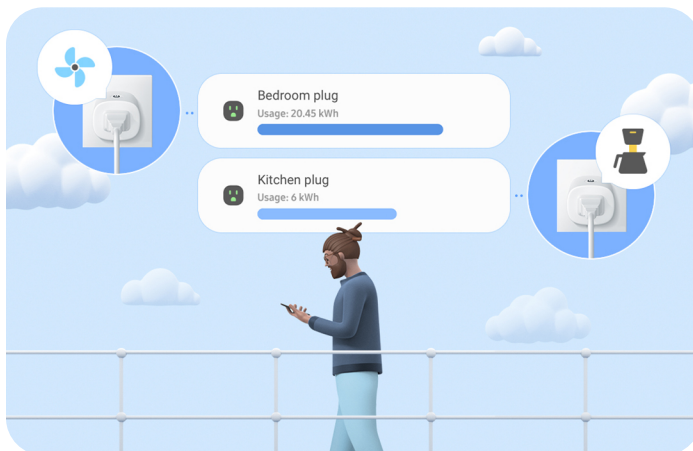
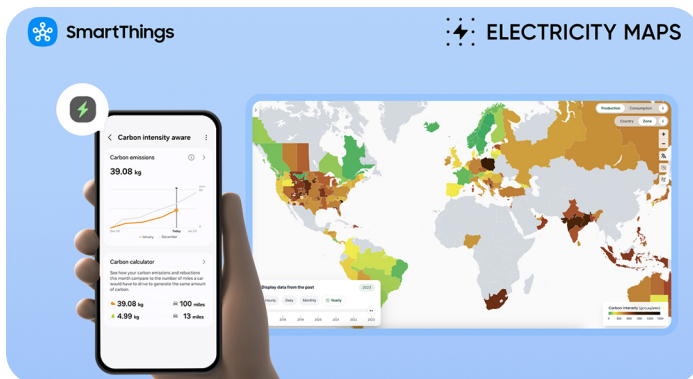
Reducing Energy Demand with Flex Connect

Automate loads like plugs, lights, and TVs to balance supply and demand of energy.

Tracking Real-time Carbon Emissions Data with Electricity Maps

Inform users via API integration about their home electricity usage, backed by historical and forecasted data.

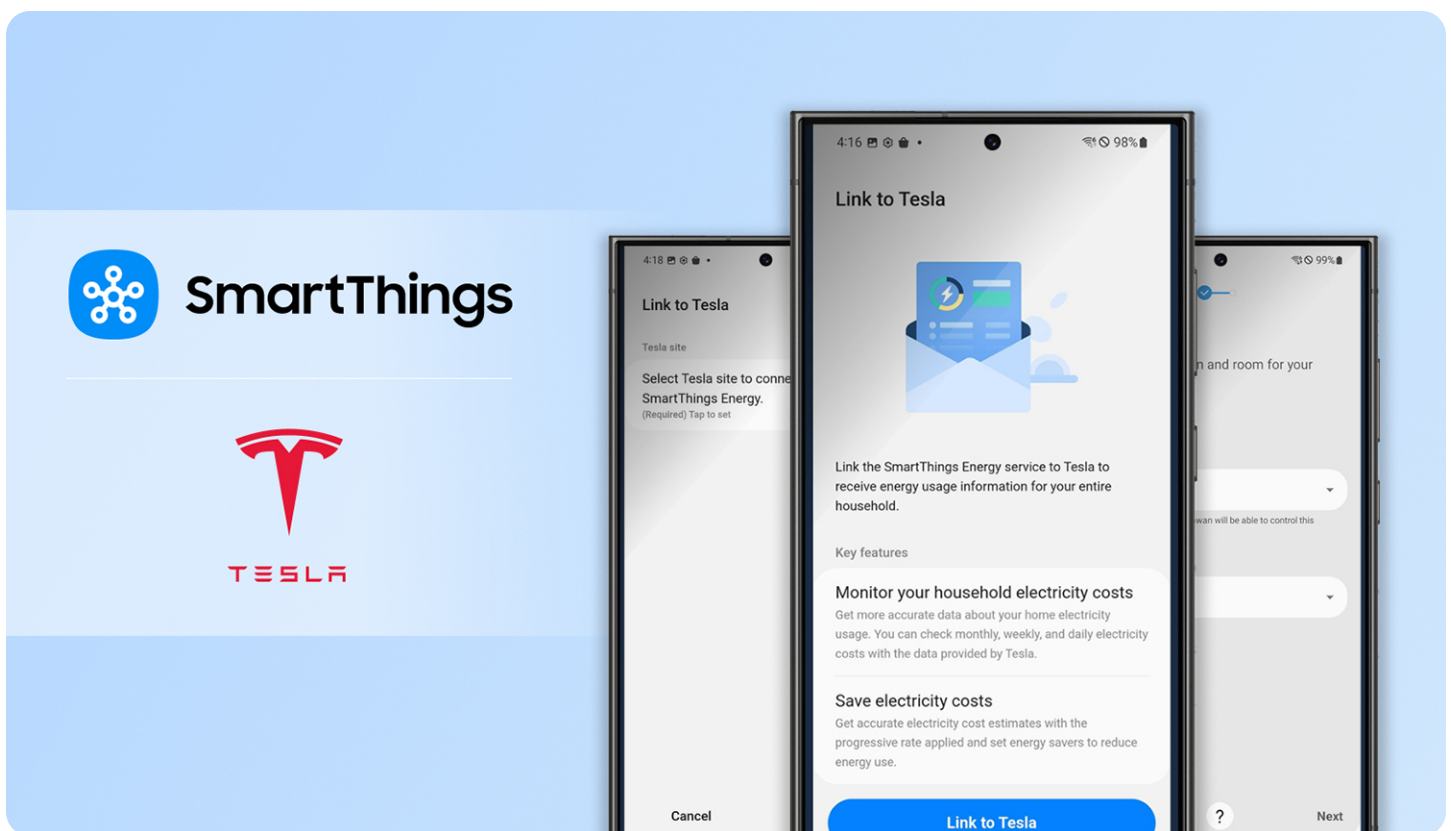
Source: <https://blog.smartthings.com/smartthings-energy/embrace-green-routines-with-smartthings-energy/>



SmartThings Announces Tesla Integration

Tesla Solar and Powerwall products are now part of the SmartThings Energy platform. Tesla users can enable Tesla notifications in the SmartThings app and receive home energy notifications and alerts through their connected Samsung TVs and mobile devices.

When a power outage occurs, the Powerwall automatically detects the outage and instantly powers the home with stored backup energy. If a storm is forecasted, Storm Watch automatically charges the Powerwall to ensure users are prepared.





Building Net Zero Homes with SmartThings

We are taking our SmartThings Energy offering to the next level by placing it at the core of the Net Zero Home – where all of a household's energy consumption is managed with energy generated within the home itself, leading to significant energy savings for the environment and cost savings for the consumer. **Today, there are more than 1.85 million app users in the U.S. alone.**

Our partnership with Siemens on the Smart City housing project in Sterling Ranch, Colorado will further our mission to support sustainable housing and empower users to live more eco-conscious lives.



ENERGY STAR Certified
Smart Home Energy
Management System

Our efforts to enrich and expand SmartThings Energy led the EPA to award us the industry's first mass-market Smart Home Energy Management Systems certification.

Download the
SmartThings App

