



**BRIGGS & STRATTON**  
ENERGY SOLUTIONS

# PREPARING FOR POWER OUTAGES:

Why More Homes and Businesses Are Now Considering Battery Storage

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## The Changing Energy Landscape

Increasingly frequent power outages and severe weather events, a growing strain on the nation's aging grid infrastructure, and rising utility costs are shifting the energy landscape across the United States.

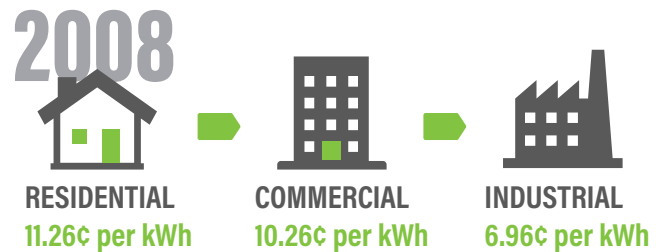
In a digital, connected world where having access to reliable power is more critical than ever, individuals and communities are looking for solutions that can protect homes and businesses against blackouts, economic losses and steep utility costs. While standby generators continue to be a common and powerful backup energy option, energy storage is quickly becoming an additional solution that people are turning to for reliable power and cost savings.

## Steadily Climbing Rates Bring Utilities Into Mainstream Discussion

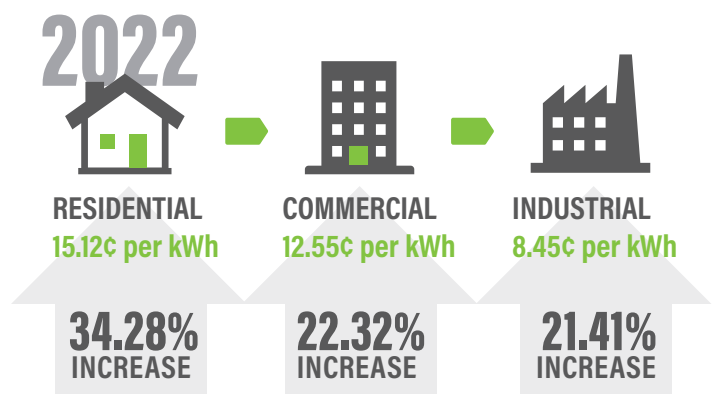
Year after year, utility costs have continued to rise as grid infrastructure degrades and climate changes have impacted weather patterns across the country, leading to further strains on the aging infrastructure.

In 2021, the average nominal retail electricity price paid by U.S. residential electric customers rose at the fastest rate since 2008, increasing 4.3% from 2020 to 13.72¢ per kilowatt hour (kWh).<sup>1</sup> In 2022, the annual average retail electricity price for residential customers again saw a significant jump in cost.

The annual average retail electricity prices by major types of utility customers in 2008<sup>2</sup>



The annual average retail electricity prices by major types of utility customers in 2022<sup>3</sup>



Utility rates are anticipated to increase further in the coming years as grid infrastructure continues to deteriorate and weather patterns continue to shift.

## Grid Failures, Outages, and Unpredictable Weather (Oh My!)

On top of rising utility costs, communities across the country are navigating more frequent large-scale power outages due to damaging storms, extreme weather and the universal and growing need for electricity that is straining the nation's aging infrastructure.

Today's grid infrastructure was not built to withstand the present-day climate. The staggering effects of climate change are reflected in its performance, resilience and capacity to meet demand. Between 2000 and 2021, about 83% of reported major outages in the U.S. were attributed to weather-related events. The average annual number of weather-related power outages increased by roughly 78% during 2011–2021, compared to 2000–2010.<sup>4</sup>

In the coming years, additional infrastructure, municipal overhauls, and improved reliability will be vital in meeting America's next stage of energy consumption. But, there are many individuals and businesses taking matters into their own hands when it comes to their energy management with the incorporation of renewable energy like solar power and battery storage systems.

### Taking a Shine to Solar Power

One type of renewable energy source that has seen significant growth in the United States is solar energy. According to the Solar Energy Industries Association (SEIA), 149 gigawatts (GW) of solar capacity has been installed nationwide, which is enough to power 26 million homes.<sup>5</sup>

Solar accounted for 50% of all new electricity-generating capacity added to the U.S. grid in 2022 and has continued to see significant growth in 2023. Today, nearly 5% of U.S. electricity comes from solar energy, almost 11 times its share a decade ago. Looking to the future, experts anticipate that the demand for solar will continue to grow. The total installed U.S. solar fleet is expected to grow five times larger than it is today, reaching more than 700 GWdc by 2033. This growth is due in large part to the long-term policy certainty created by the Inflation Reduction Act that was passed in 2022.

As demand for renewable energy sources like solar power continue to grow, an opportunity is created for power experts to take advantage of the emerging energy storage market. Currently, only 11% of solar owners have battery storage. That figure is expected to rise to 33% by 2027. The potential impact of this growing solar energy generation will be maximized with an increased adoption of battery storage in the coming years.



### An Answer for Grid Instability

Energy storage is needed now more than ever as the amount of energy generated by solar and other distributed energy resources (DERs) continues to grow. Before we dive in further, let's define what DERs are and how distributed generation plays a role in addressing grid instability.

Distributed generation refers to technologies that use DERs to generate electricity at or near where it will be used, such as solar panels and battery storage. Users of DERs may be able to enroll in demand response programs that allow them to reduce their electricity consumption when prices are high or the reliability of the grid is threatened. Users can receive payments for the reductions they make.

Distributed generation utilizes these technologies to help support the delivery of clean, reliable power to additional customers and reduce electricity losses along transmission and distribution lines.<sup>6</sup> Within distributed generation models, battery storage offers flexibility, controllability and scalability, and allows users to share stored energy back to the grid during peak demand periods.

## Emerging Need for Battery Storage

Battery storage is quickly becoming a sought-after solution by residential and commercial customers as more markets begin to understand the benefits and value that battery storage can bring to their homes and businesses.

Growth in the energy storage market has been closely tied to growth in wind and solar power because battery storage adds stability to such energy sources as wind and solar, which are both intermittent. The remarkable growth in U.S. battery storage capacity is outpacing even the early growth of the country's utility-scale solar capacity.

U.S. solar capacity began expanding in 2010 and grew from less than 1.0 GW in 2010 to 13.7 GW in 2015. In comparison, battery storage is expected to increase from 1.5 GW in 2020 to 30.0 GW in 2025.<sup>7</sup>

In the past couple of years alone, U.S. battery storage capacity has grown rapidly. In 2023, U.S. battery capacity is likely to more than double and another 9.5 GW of battery storage is expected to be added to the existing 8.8 GW of battery storage capacity.<sup>8</sup> Battery storage not only provides stability when paired with a renewable energy source such as solar, but it can also provide cost savings and reliable power when it's needed most.

As utility rates continue to rise, and time-of-use (TOU) rates are implemented, battery storage maximizes solar production during the day and allows system owners to use that stored energy during evening hours when rates are highest. Battery systems that can provide both TOU savings and resilience in the case of outages provide the best of both worlds to your customers, reducing payback time for system owners and providing them with peace of mind.

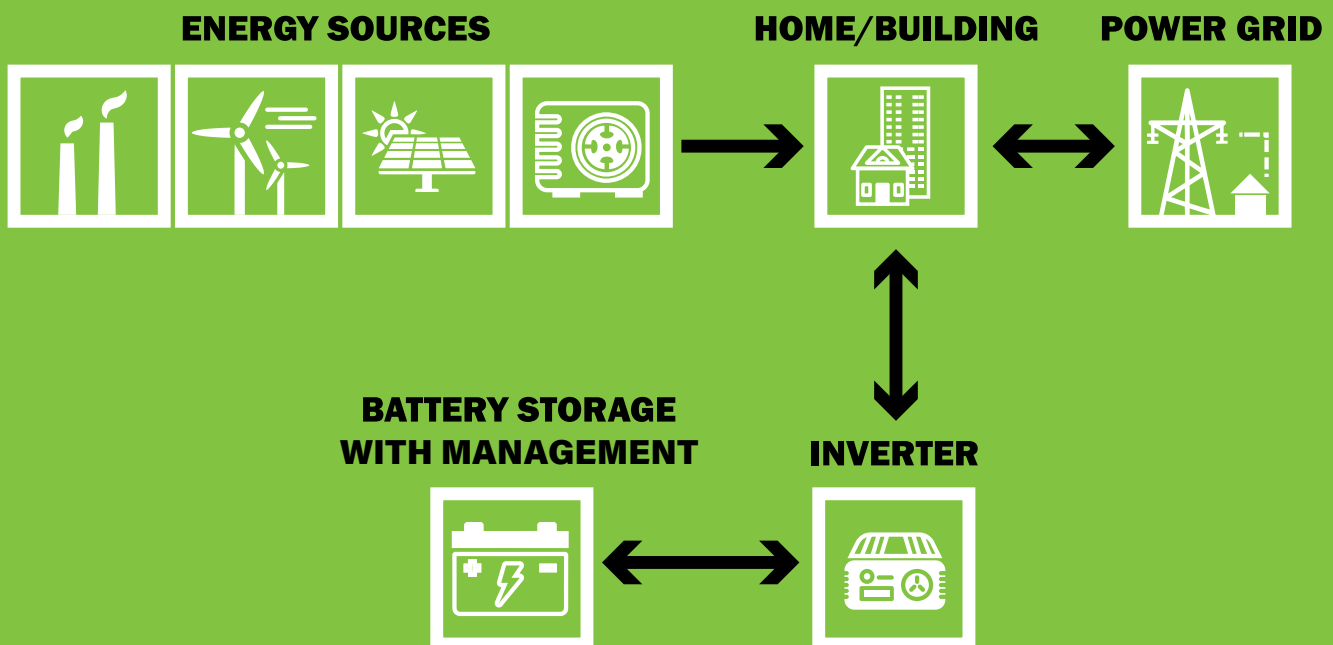
## Breaking Down Energy Storage Systems

An ESS is made up of high-performing, integrated components, including a battery, hybrid inverter and control management system that work together to deliver an efficient, easy-to-use experience for home and business owners.

At the core of an ESS is a bank of high-capacity batteries that collect and store energy generated by a power source, such as a generator or solar system. The stored energy can be utilized to provide critical backup, reduce peak utility rate costs, supplement an existing electrical system, or serve as a primary power source for a home or business.

Both the batteries and hybrid inverter should function as building blocks that support changes in energy capacity and power output requirements — allowing home and business owners to scale their ESS to meet increasing electrical loads and longer-duration backup power as their energy use and budgets change over time. The control management system gives both system owners and technicians intuitive control over the ESS and provides insight into the performance of the system.

To learn more about the basics of energy storage systems, [click here](#).





As increases in grid failures, outages, extreme weather events and rising utility costs push individuals and businesses to look into battery storage as another viable solution in addition to generators. Power solutions providers like Briggs & Stratton can help solar installers and generator dealers to tap into this budding market.

### **All-in-One Solution for Your Energy Needs: New Energy Storage System Packages From Briggs & Stratton**

Briggs & Stratton Energy Solutions is making it easy for dealers and installers to enter the rapidly growing energy storage market — even those who don't have experience selling the products — through its new Energy Storage System Packages that remove the guesswork from energy management.

These packages offer a simplified, state-of-the-art technology solution that is versatile enough to serve a variety of applications that meet the energy needs of homes and businesses. Briggs & Stratton has rolled out six package options for dealers: the SimpliPHI™ ESS Packages and the AmpliPHI™ ESS Packages.

The new ESS Packages take three core components — Lithium Ferro Phosphate (LFP) batteries, a recently-enhanced 6kW SimpliPHI inverter and the EnergyTrak™ Control System and App — and integrate them into an all-in-one bundle that combines reliability, cost-effectiveness and environmental consciousness.

**PARTNER  
WITH US**

To learn more about the new ESS Packages and how you can grow your business as a Briggs & Stratton Energy Solutions partner, **contact us today at (877) 881-0429.**

**Sources**

<sup>1</sup>During 2021, U.S. retail electricity prices rose at fastest rate since 2008, U.S. Energy Information Administration

<sup>2</sup>Total Energy, U.S. Energy Information Administration

<sup>3</sup>Electricity Explained, U.S. Energy Information Administration

<sup>4</sup>Surging Weather-related Power Outages, Climate Central

<sup>5</sup>Solar Data Cheat Sheet, Solar Energy Industries Association

<sup>6</sup>Distributed Generation of Electricity and its Environmental Impacts, U.S. Environmental Protection Agency

<sup>7</sup>U.S. Solar Market Insight, Solar Energy Industries Association

<sup>8</sup>U.S. battery storage capacity will increase significantly by 2025, U.S. Energy Information Administration



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