

# **North America Residential Backup Power Market By Type (Diesel Generators, Gas Generators, Solar Generators, Others), By Application (Standby Power, Prime Power, Peak Shaving), By Country, Competition, Forecast and Opportunities, 2020-2030F**

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## **Abstracts**

### **Market Overview**

The North America Residential Backup Power Market was valued at USD 4.31 billion in 2024 and is projected to reach USD 5.68 billion by 2030, growing at a CAGR of 4.71% during the forecast period. This market includes standby generators, solar battery storage systems, and inverter-based solutions that provide essential electricity during power outages. Increasing weather-related disruptions—such as hurricanes, wildfires, ice storms, and heatwaves—have exposed the vulnerabilities of regional power grids, prompting a surge in demand for reliable home backup power systems. These systems support critical home functions including heating, refrigeration, internet connectivity, and medical devices, making them essential for residential resilience. Rising consumer awareness, homebuilder integration of backup systems, and the shift toward sustainable energy solutions such as solar-plus-storage are accelerating market adoption. As climate volatility grows and power outages become more widespread, backup power is transitioning from a luxury to a necessity across the North American residential landscape.

### **Key Market Drivers**

Rising Incidence of Extreme Weather Events Causing Grid Instability

Extreme weather events have become a leading catalyst for backup power adoption in

North American homes. Hurricanes, wildfires, snowstorms, and heatwaves are increasingly disrupting electricity supply, making backup systems a critical part of residential preparedness. The 2021 Texas winter storm and routine preemptive shutdowns in wildfire-prone California illustrate the grid's vulnerability and the pressing need for energy resilience. This growing threat has driven a behavioral shift, with more homeowners proactively investing in backup power solutions to ensure uninterrupted energy access for essential appliances and medical equipment. Homebuilders are also integrating these systems into new constructions, expanding their presence in suburban and high-risk zones.

## **Key Market Challenges**

### **High Capital Investment and Maintenance Costs Discouraging Widespread Adoption**

The cost of acquiring and maintaining residential backup power systems remains a significant barrier to broader market penetration. Whether investing in fuel-powered generators or solar-plus-battery systems, homeowners face substantial upfront expenses, often in the thousands of dollars. Installation, permitting, and system integration further inflate the total cost. For middle- and lower-income households, these costs can be prohibitive, especially in areas with infrequent outages. Ongoing maintenance—such as fuel replenishment, part replacements, and software updates—adds to the financial burden. This cost sensitivity limits adoption primarily to affluent consumers or those in high-risk areas, restraining market growth and contributing to uneven access across the region.

## **Key Market Trends**

### **Integration of Solar Energy with Battery Storage in Residential Backup Systems**

The market is witnessing a significant shift toward solar-integrated battery storage systems as an alternative to traditional fuel-based generators. Driven by falling costs of solar panels and lithium-ion batteries, homeowners are increasingly adopting solar-plus-storage setups that offer clean, quiet, and low-maintenance backup power. These systems not only provide energy independence but also protect users from rising utility prices and supply disruptions. Enhanced by smart energy management software, these solutions allow seamless transition between grid and stored power while maximizing efficiency. Government incentives and green energy policies across the U.S. and Canada are further accelerating this transition, positioning solar storage as a dominant trend in the evolving backup power landscape.

## Key Market Players

ABB Ltd.

Caterpillar Inc.

Cummins Inc.

Exide Industries Ltd.

KOHLER Co.

Panasonic Corporation

Schneider Electric SE

Eaton Corporation Plc

## Report Scope:

In this report, the North America Residential Backup Power Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

North America Residential Backup Power Market, By Type:

Diesel Generators

Gas Generators

Solar Generators

Others

### North America Residential Backup Power Market, By Application:

Standby Power

Prime Power

Peak Shaving

### North America Residential Backup Power Market, By Country:

United States

Canada

Mexico

## Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the North America Residential Backup Power Market.

### Available Customizations:

North America Residential Backup Power Market report with the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

## Company Information

Detailed analysis and profiling of additional market players (up to five).

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