ENERGY
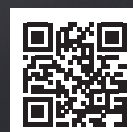## *Tech Review*

EUROPE SPECIAL

FUTURE-PROOFING ENERGY SYSTEMS WITH SMART MONITORING

Michal Sastinsky,
CEO

BatteryCheck

ENERGYTECHREVIEW.COM

ENERGY
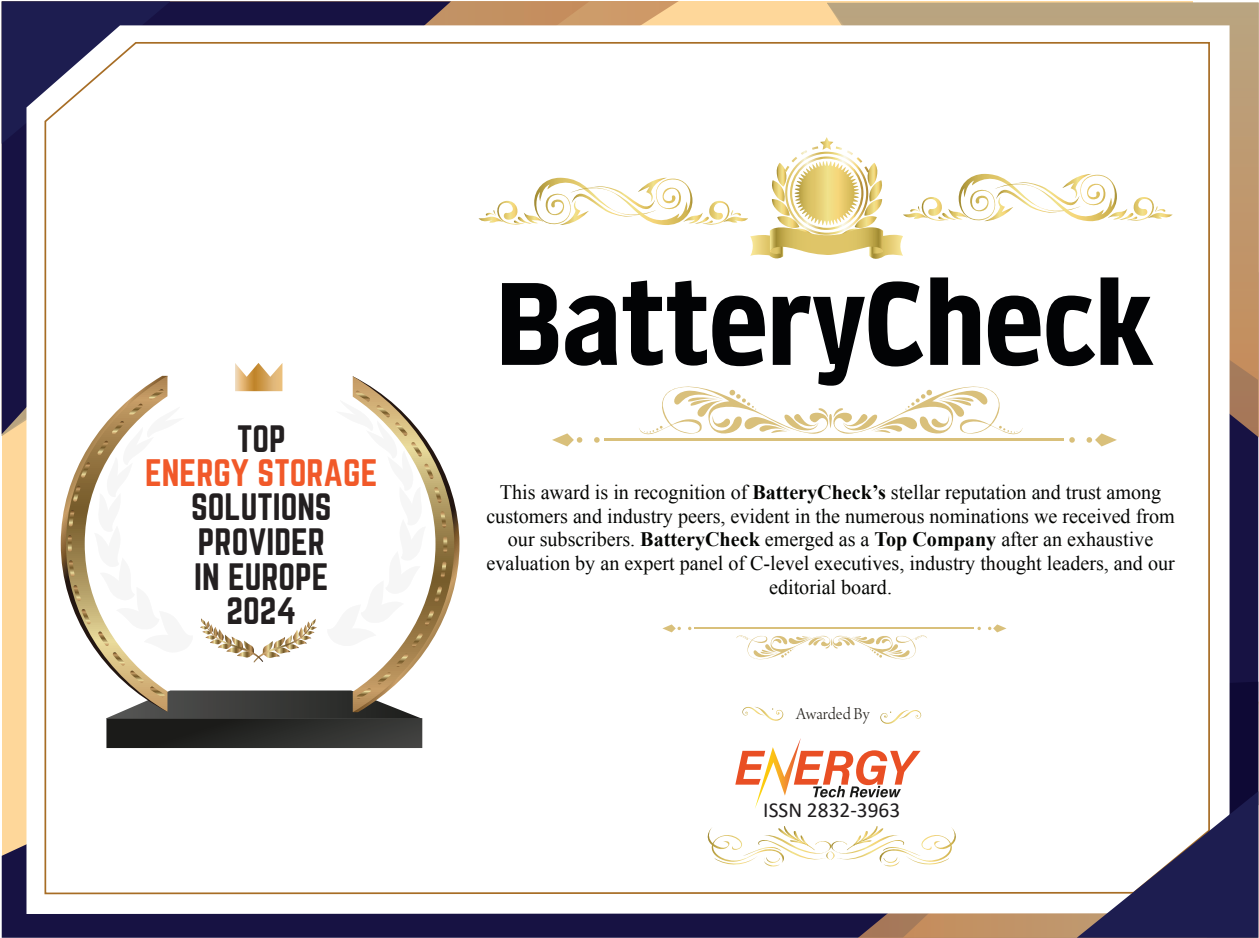## Tech Review

EUROPE SPECIAL

TOP
ENERGY STORAGE
SOLUTIONS
PROVIDER
IN EUROPE
2024

BatteryCheck

Certificate

BatteryCheck

This award is in recognition of **BatteryCheck's** stellar reputation and trust among customers and industry peers, evident in the numerous nominations we received from our subscribers. **BatteryCheck** emerged as a **Top Company** after an exhaustive evaluation by an expert panel of C-level executives, industry thought leaders, and our editorial board.

TOP
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Awarded By

ENERGY
Tech Review
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BatteryCheck

FUTURE-PROOFING ENERGY SYSTEMS WITH SMART MONITORING

BatteryCheck offers advanced prediction capabilities for businesses moving toward electrification and renewable energy sources with its cutting-edge AI-powered predictive battery monitoring system.

With the growing transition toward electric vehicles and industrial-grade battery backups, there's a need for advanced battery monitoring systems to track battery performance and predict issues before they snowball into battery failures.

"Batteries are becoming crucial as energy sources and are often relied upon for backup power, yet their health is unknown," says Michal Sastinsky, CEO.

Michal Sastinsky,
CEO

Conventional battery management systems focus on safe charging, discharging, and cell balancing. They provide only a snapshot of the battery's current status and cannot anticipate future issues or determine when intervention is needed.

BatteryCheck's patented solution addresses this gap by forecasting the battery's lifespan and performance based on telemetry data. Much like Google Analytics, it offers insights

on when to perform maintenance, replace the battery, or repurpose it for second-life applications.

Unlock Predictive Power with Advanced Monitoring

BatteryCheck's predictive monitoring system manages the battery's unpredictable nature. The innovative system offers real-time insights using telemetry measurements stored in the cloud, such as voltage, temperature, current, etc. Advanced AI and machine learning algorithms analyze the information to estimate battery life, assess health, and recommend maintenance or replacement, potentially extending its life.

The versatile battery monitoring system functions like a dynamic Lego box. It uses APIs to ingest existing telemetry measurements and send alerts, recommendations, and predictions. Customers can integrate this data into their visualization platforms, SCADA systems, or dashboards or use BatteryCheck's user-friendly dashboard.

This data is presented to customers using a reverse traffic light system with green indicating normal battery function, amber signaling the need for maintenance or replacement, and red warning of impending battery failure due to age or deterioration.

One standout feature of the system is its ability to monitor batteries like lead-acid car batteries that are often disconnected or lack internet connectivity. Unlike IoT-connected devices, which send telemetry data over the internet, this system uses external hardware to track current, voltage, and temperature for offline batteries. Once the data is collected, it can be transmitted via Wi-Fi, 3G/4G, or narrowband SIM cards.

To guarantee the integrity of this critical data, the system employs blockchain technology, ensuring that telemetry measurements and analytics results are accurately time-stamped. With a commitment to GDPR compliance, it processes no personal data, fostering transparency and user trust.

Ensuring Business Continuity with Proactive Battery Care

BatteryCheck delivers much more than technology. It offers customers invaluable peace of mind. In industries where battery
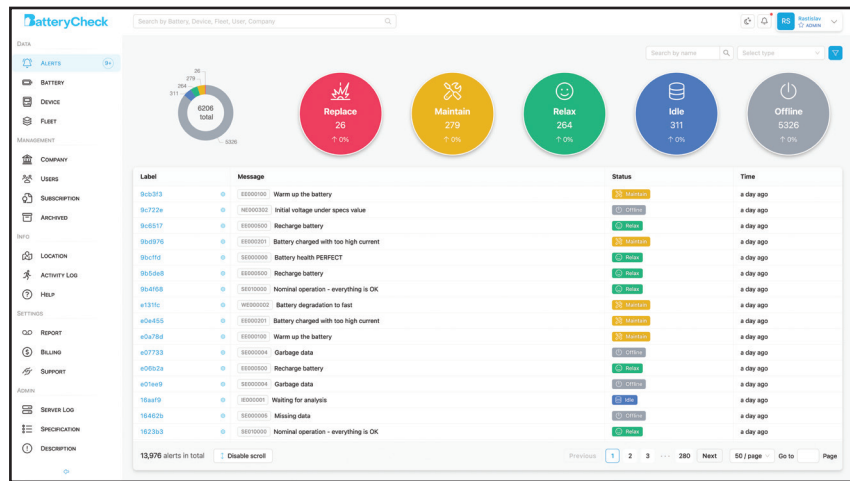
failure can lead to operational chaos, compliance issues, or safety hazards, vigilant monitoring is the key to mitigating risk.

A compelling case study of an anti-smoke roof windows installation company highlights the critical role of proactive battery care in large warehouses. Regulations mandate that these windows be operational during a fire to prevent inhaling smoke. This requires lead-acid batteries to operate for at least 72 hours, even if the main power is cut. The installation company faced compliance issues due to unmonitored batteries that could fail to function, posing severe risks.

After implementing BatteryCheck's monitoring system, the installation company expressed satisfaction with the improved oversight and control, stating they can now preemptively address potential failures, significantly reducing the risk of dire consequences. With real-time data, the procurement team can order batteries in bulk, cutting costs, while the service team can efficiently replace several batteries in a single visit with full visibility into the status of batteries.

New Revenue Streams in the Circular Economy

Beyond predictive maintenance, BatteryCheck's solutions allow businesses to tap into the circular economy by facilitating battery repurposing for second-life applications and overseeing the entire lifecycle, from initial use to its final phase.

"We enable second-life battery resale, providing health records to repurposed batteries,' and helping to create affordable energy storage systems," says Sastinsky.

Unlocking new revenue generation possibilities, BatteryCheck's solution has already made waves across various industries, from manufacturers of on-road and non-road electric vehicles to telecommunication and anti-smoke roof window installation companies.

BatteryCheck helps an electric vehicle manufacturer supplying road cleaning and waste collection vehicles to municipalities. Recognizing that municipalities often face financial constraints when purchasing these vehicles, it plans to shift its business model from selling to offering a rental solution.

The comprehensive monitoring system from BatteryCheck enables the manufacturer to alert customers about potential

issues before they arise, shifting from reactive to proactive maintenance, reducing vehicle downtime, and enhancing electric vehicle adoption across the municipal landscape. The manufacturer's reaction is overwhelmingly positive. When batteries no longer meet performance standards, they can be resold on the secondary market with a complete health record from BatteryCheck's system, adding further value.

BatteryCheck responsibly addresses the environmental challenges in battery management. It brings a forward-thinking solution for telecom operators reliant on extensive infrastructure, including thousands of cell towers, to provide reliable GSM and data services.

A critical component of this infrastructure is the backup battery system, designed to ensure ongoing service during power outages or fluctuating energy demands.

> " **BATTERIES ARE BECOMING CRUCIAL AS ENERGY SOURCES AND ARE OFTEN RELIED UPON FOR BACKUP POWER, YET THEIR HEALTH IS UNKNOWN** "

Prime examples of the effectiveness of BatteryCheck's system are discussions with prominent telecommunications operators who encountered significant challenges with their battery management practices. Each year, they replace multiple batteries at their cell towers due to concerns about longevity and performance, particularly in humid, salty environments that negatively affect battery lifespan.

Adopting BatteryCheck's advanced monitoring systems, these operators will gain complete visibility into battery status, reducing uncertainty around replacements and enhancing operational efficiency.

BatteryCheck is changing how businesses perceive batteries by encouraging them to view them as strategic assets. Companies that rely on batteries for critical operations can't afford to wait until a failure happens.

Partnering with BatteryCheck empowers companies to foresee battery health, ensuring operational continuity and confidently embrace a sustainable future in the transition to electric and renewable energy. **ET**