



## Optimizing Risk Management with Continuous Battery Monitoring

### Challenges of BESS Operations

Battery Energy Storage Systems (BESS) are complex and diverse, making fragmented manual monitoring unmanageable. Standard Battery Management Systems (BMS) and OEM dashboards often fail to provide the comprehensive insights required for effective risk and performance management.

### How volytica Supports Your BESS Risk Management

Use our comprehensive approach with the vdx sentry:

#### EARLY DETECTION, LOWER RISK

- | Proactive failure detection
- | Predictive Maintenance
- | Maximum uptime availability

#### BEYOND BMS CAPABILITIES

- | Self-learning algorithms
- | Peer group comparisons
- | Risk-adjusted recommendations

#### INDEPENDENT MONITORING

- | Integration of multiple vendors
- | Data consolidation
- | Independent data analysis

### Tailored Services for Every Phase

We provide independent analysis of the BESS during the critical phases of installation and ramp-up and ensure comprehensive ongoing monitoring.

#### Before Commissioning

##### Pre-COD Services\*

- Factory Acceptance Testing
- Site Acceptance Testing

\* Commercial Operations Date



#### Ongoing Operation

##### Post-COD Services\*

- Continuous safety monitoring
- Performance optimization
- Lifetime management

### Our Collaboration with Insurers

From the insurer's perspective, we enhance safety, risk management and value retention.

- **Shaping Insurance Practices:** We work closely with insurers to ensure active battery monitoring benefits are reflected in pricing and terms.
- **Customized Insurance Solutions:** Every BESS is unique — there is no standard insurance offering; we set new standards for assessing and covering BESS risks.
- **Sharing Expertise:** We share our expert opinion and insights with risk engineers, and actuaries to enhance their understanding of BESS risks. In addition, we offer joint training courses for our customers.

**Get in Touch**

**Our dedicated insurance expert looks forward to connecting with you. Please reach out.**

volytica diagnostics GmbH

@ insurance@volytica.com

www.volytica.com

in /volytica



# Guiding you from volts to value.

## vdx sentry by volytica diagnostics

Simplifies Battery Energy Storage System (BESS) operations and focuses on relevant alerts with expert recommendations, enhancing usability and efficiency.

- Prominent warning messages in the dashboard
- One-click access to event details and handling guidance
- Integrated 1<sup>st</sup> level support for rapid issue resolution

volytica.com/sentry

## Functionality: How It Works

- Data Integration:** Share your Battery Data via any File Format, Cloud-to-Cloud Integration or APIs.
- Flexible Options:** Integrate diagnostic results into your SCADA system and use our white-label software. Access detailed battery analytics via our vdx dashboard.
- Easy Onboarding:** No additional hardware required, only standard signals must be available in the cloud.
- Retrofit Capability:** The solution can be seamlessly integrated into existing systems and setups.

## Key Performance Indicators (KPIs)

- Battery Status:** SOHnet (State of Health).
- Efficiency Metrics:** Round-Trip Efficiency (RTE), Recovery Efficiency (RE)
- Stress Levels:** Monitoring key parameters like temperature, power and SOC
- Anomaly Detection:** Advanced indicators for early issue identification
- Aggregated Statistics:** Usage profiles, uptime, energy throughput, and more

## What You Get

- Custom Reports:** Detailed degradation analysis, efficiency summaries and more.
- Dashboard Access:** Real-time system status and historical data.
- Consulting:** Expert guidance to optimize performance and mitigate battery-related risks.

## Insurance-Ready Reporting

Our custom reports align with insurance requirements, covering critical metrics like State of Health, Efficiency, and Availability. Share these with your insurer to secure better terms and reduce premiums.

Enjoy tailored support for your BESS project. Contact our expert team for customized solutions.



Discover Battery Diagnostics  
and Benefit from  
Personal Consultancy

volytica diagnostics GmbH | [www.volytica.com](http://www.volytica.com)  
[insurance@volytica.com](mailto:insurance@volytica.com) | +49 351 87 95 87-00  
Theresienstrasse 18 | 01097 Dresden, Germany