



## LEAD BATTERIES: ENERGY STORAGE CASE STUDY



### NorthStar Battery

## Community Now Has Power When They Need It



### City Utilities, Missouri, USA

A community-owned electricity supplier in Missouri, serving more than 100,000 people, is being supported by an energy storage solution powered by lead batteries.

The facility (pictured) in Springfield is managed in a partnership between City Utilities and NorthStar Battery, where the company has installed a 1 MWh lead battery energy storage facility at a sub-station in a residential area of the town.

**“ We can draw power when we need to, we can deploy power when we need to, and in the event of an ice storm, we have two-and-a-half-megawatt hours of energy available for the local community.”**

Dr. Frank Fleming, co-founder NorthStar Battery

### Technical Specification

The battery energy storage system (BESS) contains 15-parallel strings, each containing 76 x 12V-monoblocs of the NorthStar Battery BLUE+ absorbed glass mat (AGM) lead battery technology, giving a total of 1,140 x monoblocs, housed in two 40-foot pre-fabricated modular buildings.

The BESS has a total storage energy of 2.5MWh, but in daily operation is limited to a 40 percent depth of discharge to maximize discharge energy throughput for its operational life. Full battery energy is available for emergency situations such as severe weather events.

NorthStar lead batteries are intrinsically safe in normal operation, present no inherent fire risk and are virtually 100 percent recyclable at the end-of-life, presenting no environmental concerns.



## About the Company

NorthStar Battery is a global leader in designing, manufacturing and deploying an innovative range of batteries and power solutions using thin-plate pure lead technology.

The company was established in 2000 by a group of experts in the lead battery industry, who together hold more than 100 years of experience. NorthStar products are so reliable and cost-effective they are used in more than 150 countries.

NorthStar employs over 500 people worldwide, with headquarters in Sweden and major operations in the USA and China. NorthStar also has global distribution and service centres, which include Indonesia, Dubai and Singapore.

**“NorthStar Battery is “world class when it comes to battery technology and battery storage systems.”**

Scott Miller, General Manager of City Utilities

**CONTACT**

**Dr. Alistair Davidson**  
Director

alistair.davidson@batteryinnovation.org  
BatteryInnovation.org