Bennewitz, Germany
Located in Bennewitz, Saxony, is a large-scale, 25 MWh lead-carbon battery energy storage system.

Narada, one of China's leading battery energy storage system suppliers partnered with energy storage operator, Upside Group, in a 16 MW frequency regulation project for the German power grid.

The 25 MWh installation has been connected to the local utility grid since May 2019.

“In the energy storage market, this project is an important step for the development of lead batteries. It is a milestone for Narada to have a significant capacity in frequency regulation,” says Dr. Nian Xianyi, General Manager, Narada.

Technical Specification
The battery system houses more than 10,500 individual battery cells with nine battery inverters, in 18 containers.

The batteries used are 1200 Ah lead-carbon valve-regulated provided by Narada.

Power is delivered through nine SMA Sunny Central Storage Inverters, supplied by SMA Solar Technology, each capable of delivering 1.8 MVA.

SMA also installed a Hybrid Controller for optimized battery charging and discharging.

The coordinated system solution allows optimal control to provide grid relief for the entire region, and the stabilization of the Central European utility grid.

Narada
Large-scale Grid Frequency Regulation System

As Narada deploys more and more projects in Germany and worldwide, this is an exciting step forward for our company and our innovative technology, bringing us further into the energy storage market.”

Zhu Baoyi, CEO, Narada
All the battery cells are individually monitored to ensure any deviation in performance is detected and corrected before there is a problem. The battery is operated at partial state-of-charge to that it can accept and deliver charge at all times.

Each container has 588 units 2 V cells which are installed on site.

The Narada lead-carbon technology used was developed in partnership with CBI, and the REX Carbon cells have a calendar life of 15 years and an extended cycle life in shallow cycle service.

They have been extensively deployed in China for peak shaving, off-grid wind power installations, and in telecommunications hybrid solutions and energy storage model datacenters.

### Technical Summary

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<tr>
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<td>20  kV</td>
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<td>PCR Power</td>
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<td>Storage Tech</td>
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<td>Storage Cap.</td>
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| Architecture     | 9  MVPS  
|                  | 18  Storage |

### About the Company

Narada was established in Hangzhou, China in 1994 and has evolved into one of the world's leading battery suppliers. The company majors in valve-regulated lead batteries and lithium batteries for various applications.

The renewable energy storage section is a major market for the company and Narada has an increasing presence in international markets.