GUANGZHOU ZHIG

2022

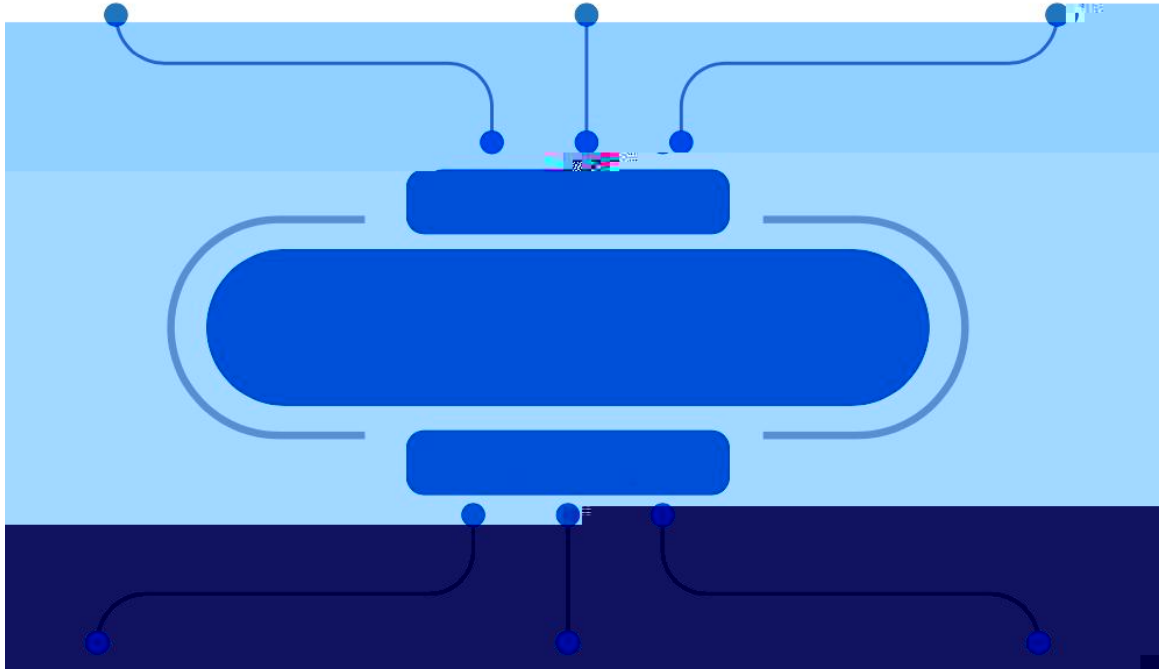
CONTENTS

Guangzhou Zhiguang Energy Storage Technology Co., Ltd., established in 2018, is a holding subsidiary of Guangzhou Zhiguang Electric Co., Ltd. [hereinafter referred to as Zhiguang], and is an important layout of Zhiguang in the strategic development direction of digital energy technology and integrated energy services. The company makes full use of the parent company's more than 20 years of research and application experience in power electronics technology, automation, and information technology, and smart energy technology, actively introduces senior research teams in the battery industry, widely carries out domestic and international university cooperation, and builds a professional research team in the fields of the battery pack, BMS, EMS, and PCS.

The company not only provides services including energy storage investment, energy storage system integration, energy storage equipment sales, etc., but also provides core key technologies and equipment such as energy storage battery PACK integration, BMS, PCS and EMS, and can provide battery cell and battery PACK testing technology services.

The company's energy storage product lineup includes power station-type large-capacity energy storage systems (cascaded high-voltage energy storage), demand-side energy storage systems (modular low-voltage energy storage) and mobile energy storage products.

Company Profile



Company Profile

2018 the best system integration solution provider of Energy Storage in China.

2018 the best inverter supplier of Energy Storage in China.

2019 The best system integration solution provider in China's energy storage industry.

2019 The most influential enterprise in China's energy storage industry.

2019 Top 10 Energy Storage PCS Enterprises in China.

2019 The Third International Energy Storage Innovation Competition, "Energy Storage Technology Innovation Model TOP10".

2019 The winner of the 8th China Innovation and Entrepreneurship Competition (Guangzhou).

2020 Top 10 Energy storage PCS Enterprises in China.

2020 Top 10 Energy storage integrators in China.

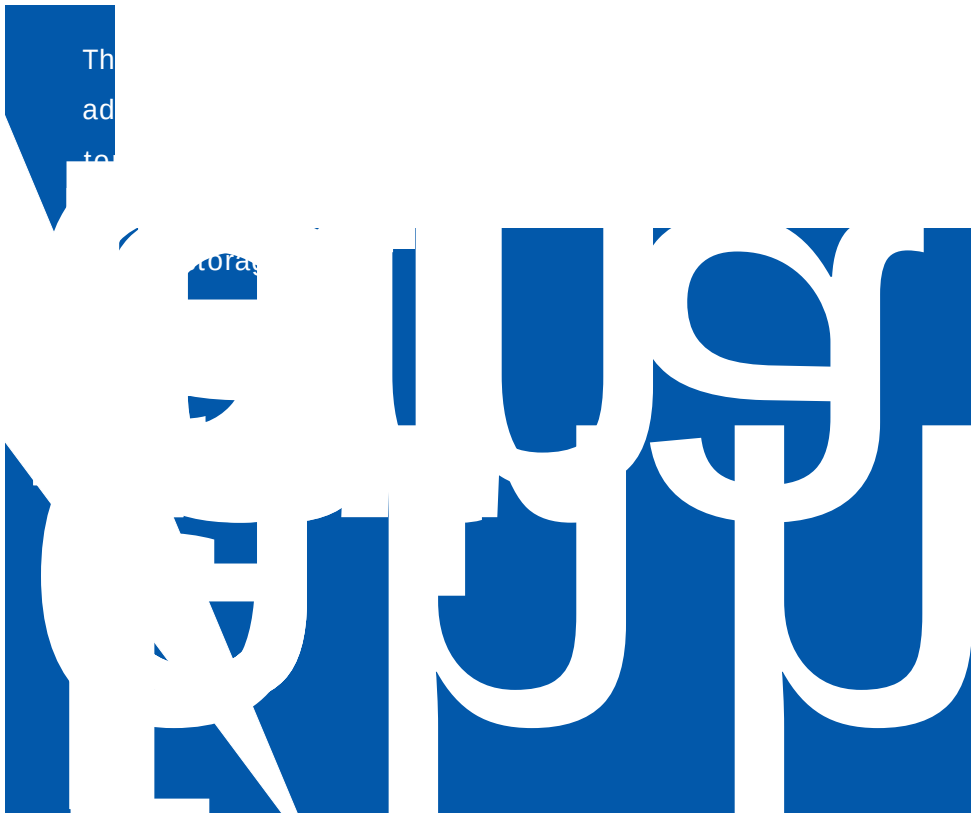
2020 Energy Storage Cutting-Edge Enterprise Award.

2020 China energy storage industry most influential enterprise.

Technology patent accumulation

Formulate national and industry standards

Before Guangzhou Zhiguang Energy Storage Technology Co., Ltd. was founded in 2018 has already applied for more than , and was responsible for drafting or participating in more than before the end of 2021.



Due to the retirement battery having a unified voltage, and discretization parameter, under the standardization design and commercial customer requirement, a modular ESS system is necessary for development, which uses small rating PCS to achieve cluster level direct control. It can avoid parallel connection and solve cluster circulation current issues and minimize the potential risk, and achieve active equalization to balance the cluster energy balance.

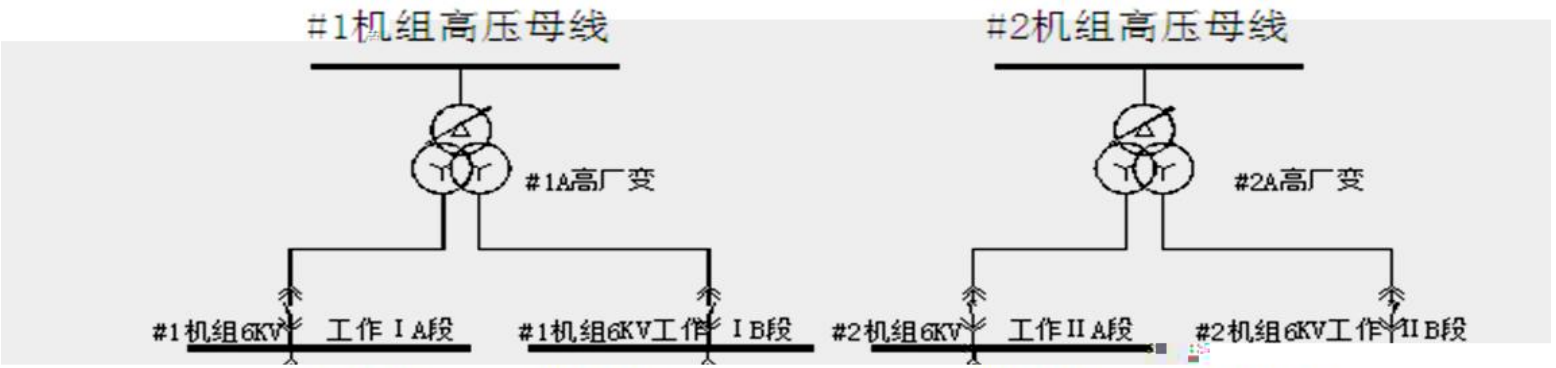
This modular ESS (standard capacity: 250kW/500kWh) can expand by parallel connection on the AC side and cĎJ

The mo

Zhiguang cascade high-voltage energy storage system has been applied to the State Grid, China Southern Power Grid, Huaneng Group, Huadian Group, CTGNE, China Energy Group, Guangdong Energy Group, and other customers, and the cumulative construction and commissioning projects by the end of 2021 exceed 400MW/450MWh. The project of Desheng Power Plant (Wusha Power Plant) in Shunde, Guangdong province was included in the first batch of scientific and technological innovation demonstration projects of the National Energy Administration.

In 2022, the company successfully researched and developed 35kV cascading high-voltage energy storage, with 20MW/40MWh and the round trip efficiency is up to91% which provides a more efficient, safe, and simple energy storage power station solution for large-scale shared energy storage power stations.

Zhiguang has been leading the development of cascade high voltage and large capacity energy storage technology.



The total scale of the ESS for auxiliary frequency modulation in the coal power plant is 9MW/4.5MWh, consisting of six battery and power conversion containers and one central control container.

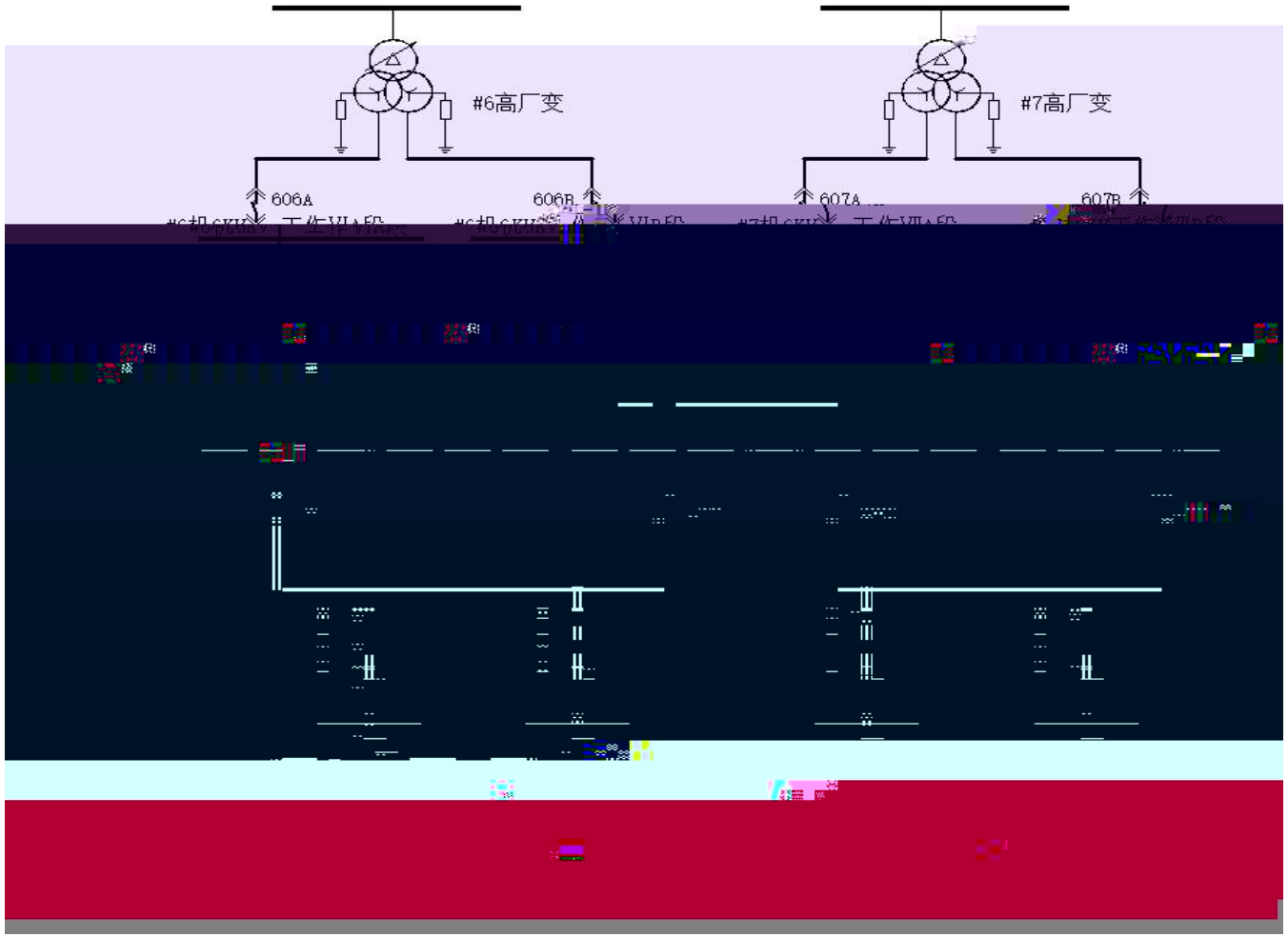
The energy storage system is connected to coal power plant unit 1 and unit 2 through the 6kV cable to the transformer Section A and B busbar. Through rapid and accurate charging and discharging, the secondary frequency modulation performance is greatly improved, and improve the frequency modulation income.

Typical Applications

600MWFrequency modulation of coal power plant

20MW/10MWh

Typical Applications



The total scale of the ESS for auxiliary frequency modulation in the coal power plant is 20MW/10MWh, consisting of 12 battery and power conversion containers, 2 central control containers and 1 master control container.

The storage system is connected to coal power plant unit 6 and unit 7 through the 6kV cable to the transformer. Through rapid and accurate charging and discharging, the secondary frequency modulation performance is greatly improved, and improve the frequency modulation income.

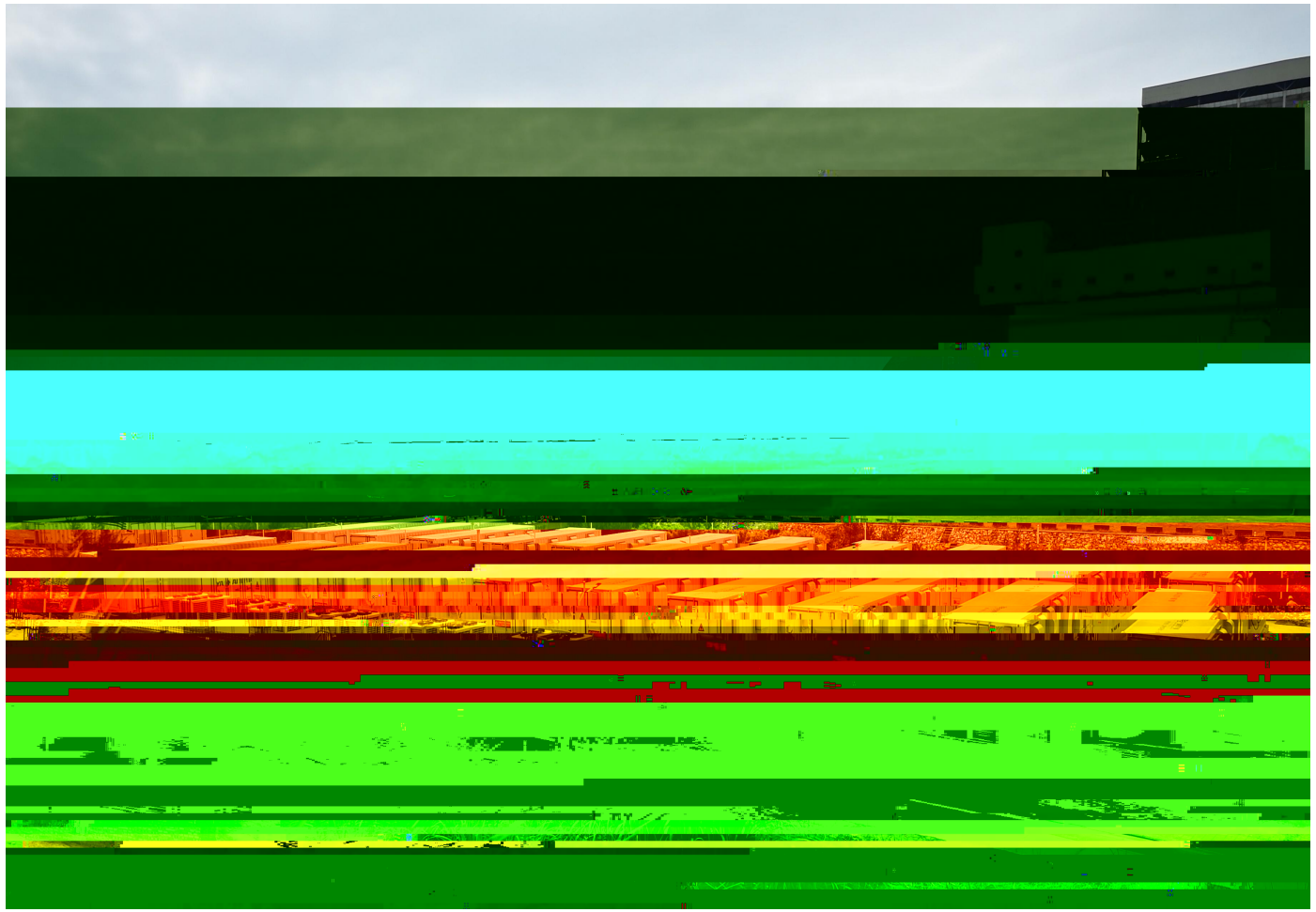
Typical Applications

9MW/4.5MWh

AGC and

First time applying the cascaded energy storage system in the cold region of north China

Typical Applications

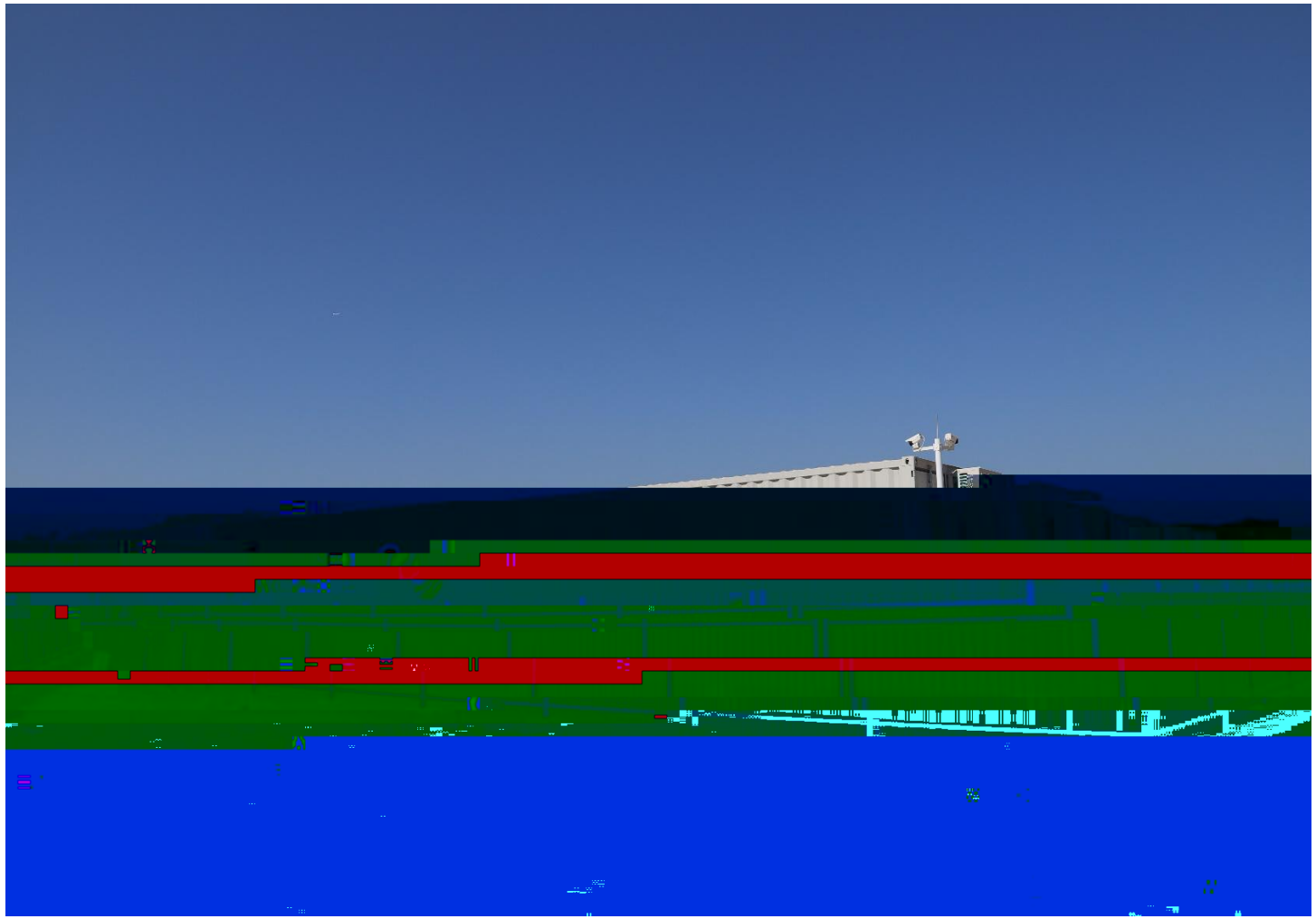


30MW/15MWh, new record of the cascaded high voltage energy storage system

AGC and

1000MW Coal Power Plant frequency modulation

Typical Applications



10MW/20MWh

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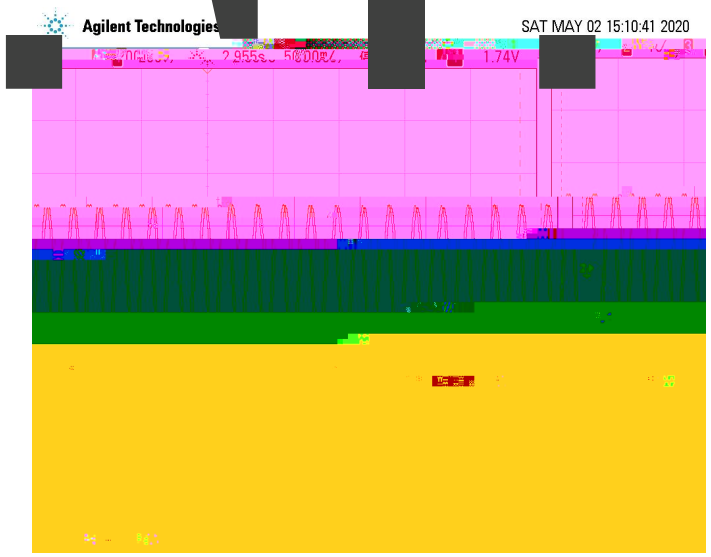

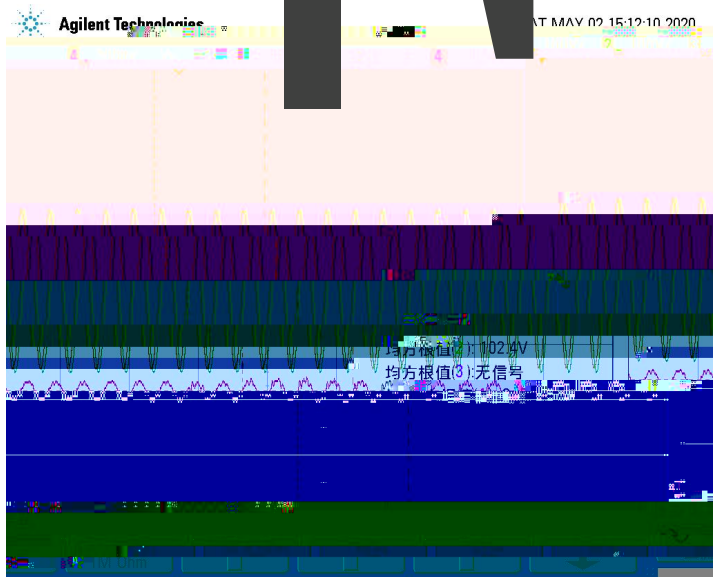

The green waveform line is the output voltage of the energy storage system, and the red and purple waveform lines are the load current of the energy storag s

- Seamless switching without disturbance
- Black-start operation
- It can support peak-load shifting and demand side response to save electricity

10MW/20MWh

The first COD of hunan Power Grid Phase II renewable ESS project