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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 42317-2023

**Code for emergency exercises of electrochemical energy
storage station**

电化学储能电站应急演练规程

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Foreword

This document was issued on 17 March 2023 by the State Administration for Market Regulation; Standardization Administration of the PRC and takes effect on 1 October 2023.

It is a GB/T standard: recommended rather than compulsory, but it is the text a Chinese reviewer applies when assessing a submission.

1 Scope

GB/T 42317-2023 sets out how an electrochemical energy storage station runs an emergency exercise against a production safety accident: how the exercise is planned, prepared, carried out, judged afterwards and fed back into the plan. Plan preparation starts from the station's own contingency plan and its actual situation. Work preparation builds the organisation the exercise needs, beginning with a commander-in-chief who is answerable for it, and the process implementation clause, much the longest, covers the filing with the relevant government departments, the notice given to the units involved, the record kept while the exercise runs, and the conduct of the exercise itself. Evaluation and summary and continual improvement close the loop, and an informative appendix gives implementation steps for cell fire exercises by chemistry, covering lithium-ion, lead-acid or lead-carbon, and sodium-ion cells. The reason for rehearsing lies in the failure mode: a cell that goes into thermal runaway takes the container with it faster than an unrehearsed crew can settle who

is in charge, and the first minutes decide whether the event stays inside one rack. For storage station operators and their safety staff, for owners writing operation and maintenance contracts, and for the local emergency services who would be called out.

This document specifies the requirements for emergency exercise plan preparation, work preparation, process implementation, evaluation and summary, as well as continuous improvement for production safety accidents of electrochemical energy storage station.

This document applies to emergency exercises of electrochemical energy storage station with lithium-ion cell, flow cell, lead-acid (carbon) cell, sodium-ion cell, water-electrolysis-produced hydrogen/fuel cell as energy storage carriers.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable to its application. For dated references, only the version corresponding to that date is applicable to this document; for undated references, the latest version (including all amendments) is applicable to this document.

GB/T 42312, Guide for production safety emergency response plan of electrochemical energy storage station

AQ/T 9008, Training syllabus and examination specification for work safety emergency management professionals

AQ/T 9009, Specification for emergency exercises evaluation of production safety accidents

AQ/T 9011, Guidelines for enterprises to assess emergency response plan on work place accidents

DL/T 692, Electric power trade urgently saving technique rule

DL/T 2528, General terminology of electrical energy storage

3 Terms and definitions

Terms and definitions determined by DL/T 2528 and the following are applicable to this document.

4.4 The emergency exercise of electrochemical energy storage station shall be reported to the superior unit of the power station and the competent department of the local government in advance. Also, the relevant surrounding units shall be notified and informed of the relevant information of the emergency exercise.

4.5 Before the emergency exercise of electrochemical energy storage station, the information such as the quantity, quality, and inspection status of the emergency supplies and equipment shall be reviewed; after the exercise, the emergency supplies shall be replenished in time, reviewed, and confirmed again.

5 Plan preparation

5.1 Requirement analysis

The electrochemical energy storage station shall prepare a contingency plan according to the requirements of GB/T 42312 and its own actual situation, which shall clarify the emergency exercise requirements of the electrochemical energy storage station, analyze the risk factors and weak links in the operation and maintenance of the electrochemical energy storage station, and determine plans for emergency exercise, etc.

5.2 Plan preparation

The electrochemical energy storage station shall prepare the emergency exercise plan for the next year at the end of the previous year, which shall determine the accident scenario type, accident area, participating units of the emergency exercise, main tasks of each stage of the emergency exercise, and the planned date for the implementation of the emergency exercise, etc.

5.3 Plan release

The electrochemical energy storage station shall release the emergency exercise plan to the personnel of the unit one week in advance. For emergency exercises that require the cooperation of government departments such as traffic control and fire protection, the relevant units shall be contacted in advance and informed of the main purpose, type, form, time and content of the emergency exercise, as well as the departments and personnel that need to cooperate; the announcement of the emergency exercise plan

shall be released in advance in accordance with the requirements of relevant units.

6 Work preparation

6.1 Organization

6.1.1 Commander-in-chief

A commander-in-chief, who is responsible for organizing and leading the preparation and implementation of the exercise, shall be set for the emergency exercise. The commander-in-chief, held by the person in charge of the exercise unit, shall examine and approve the exercise work plan, exercise safety guarantee plan, exercise work funds, and other important matters that need to be decided, approve the start and end of the exercise activity, and in case of emergency during the exercise, approve the start of the exercise safety guarantee plan, and direct the emergency handling.

6.1.2 Planning and steering team

The planning and steering team of the emergency exercise - composed of the equipment management and dispatching and monitoring personnel of the exercise unit - is responsible for the preparation of the exercise work plan, exercise script, and exercise safety guarantee plan, and responsible for the preparation of the exercise activity, the layout of the accident scenario, the control of the exercise process, the maintenance of the exercise order, and the scheduling of participants and materials, as well as the liaison and coordination with relevant units and working groups.

6.1.3 Logistical support team

The logistical support team of the emergency exercise - composed of the logistics personnel of the exercise unit - is responsible for the funding guarantee, transportation guarantee, energy guarantee, security guarantee, technical guarantee, medical guarantee, record guarantee and other logistics related guarantee measures in the exercise activity.

6.1.4 Exercise rescue team

The exercise rescue team of the emergency exercise - composed of the operation and maintenance personnel of the electrochemical energy storage station and firefighters - shall, according to fire accidents, sudden environmental events, equipment electric