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

GB/T 42318-2023

**Guide for environmental impact assessment of electrochemical
energy storage station**

电化学储能电站环境影响评价导则

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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 42318-2023 covers how the environmental impact of an electrochemical energy storage station is assessed and written up - the general requirements for the assessment, the overview of the station itself with its name, the nature and location of the works, its scale, its site and the area and type of that site, the survey and assessment of the environment as it already stands, the prediction and assessment of the impacts the station will add, the protection measures, the management and monitoring plan, and the conclusion the report has to reach. The status survey is scoped so that it reflects the environmental background of the area and the problems already present in it, which is what allows the contribution of the station to be separated from what it inherits. Protection measures are set against the object, scope and degree of each adverse impact and run from prevention through reduction to restoration, rather than being listed in the abstract.

Appendix A sets out the assessment process as a flow. Storage stations are built where the load is, which usually means close to people, and this report is the document a reviewing authority approves or refuses the site on. Written for developers, environmental assessment institutes and reviewing authorities.

This document specifies the general situation, status survey and assessment, impact prediction and assessment, protection measures, management and monitoring plans, and assessment conclusions of electrochemical energy storage station.

This document is applicable to the environmental impact assessment of electrochemical energy storage stations using lithium-ion cells, flow cells, lead-acid (carbon) cells, sodium-ion cells, and water-electrolysis-produced hydrogen/fuel cells 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 3096, Environmental quality standard for noise

GB 8702, Controlling limits for electromagnetic environment

GB 12348, Emission standard for industrial enterprises noise at boundary

GB 15603, Rule for storage of chemical dangers

GB 17914, Specifications for storage and preservation of combustible and explosive goods

GB 17915, Specifications for storage and preservation of corrosive goods

DL/T 2528, General terminology of electrical energy storage

HJ 2.1, Technical guideline for environmental impact assessment of construction project - General programme

HJ 2.2, Guidelines for environmental impact assessment - Atmospheric environment

HJ 2.3, Technical guidelines for environmental impact assessment - Surface water environment

4.3 The environmental impact factors involved in the electrochemical energy storage station include the atmosphere, surface water, groundwater, soil, sound, electromagnetic and ecological environment. The identification of environmental impact factors shall clarify the relationship between the various behaviors of the electrochemical energy storage station during the construction period, operation period and post-service period AND the possible environmental factors that may be affected, the nature of influence, the scope of influence, the degree of influence, etc. Analyze the pollution impact and ecological impact that the electrochemical energy storage station may have on various environmental elements, including favorable and unfavorable impacts, long-term and short-term impacts, reversible and irreversible impacts, direct and indirect impacts, cumulative and non-cumulative impacts, etc.

4.4 Assessment factors shall be screened and determined based on the identification of environmental impact factors and combined with regional environmental function requirements.

4.5 When the electrochemical energy storage station is located in an environmentally sensitive area specified in the Classification Management List for Environmental Impact Assessment of Construction Project, it shall explain the reason for building in the sensitive area, the impact of the battery on the environment, and carry out ecological planning compliance, environmental rationality, and project feasibility analysis.

4.6 The assessment grade and assessment range of atmospheric environment, surface water environment, groundwater environment, soil environment, noise environment, electromagnetic environment and ecological environment shall comply with the regulations of HJ 2.1, HJ 2.2, HJ 2.3, HJ 610, HJ 964, HJ 2.4, HJ 24 and HJ 19.

4.7 The assessment period includes three periods: construction period, operation period and post-service period. The assessment level year shall be determined according to the characteristics of the electrochemical energy storage station and its surrounding environment, and the recovery of environmental impacts. The status assessment level year can be 1 to 2 years before the start of construction; the prediction and assessment

level year of the construction period can be the first year of the construction period; the predication and assessment level year of the operation period can be 1 to 2 years after operation; the prediction and assessment level year of the post-service period can be one year after the expiration of the service period.

5 Overview of the power station

5.1 Basic information

The basic information includes the electrochemical energy storage station's name, construction nature, construction location, construction scale, station site, area and type, layout, type of electrochemical energy storage battery, rated charging power, rated discharging power, rated charging energy, rated discharge energy, system architecture, voltage level of power transformation and distribution facilities, electrical main wiring, and other production and living facilities within the site, etc., as well as the geographical location map of the area and the general plan that clearly defines the relative position relationship with the environmentally sensitive area.

5.2 Construction plan

The construction plan includes construction organization, construction materials, construction techniques, etc.

5.3 Main technical and economic indicators

The main technical and economic indicators include power station capacity, battery type, floor area, building area, total investment, construction period, environmental protection investment, etc.

5.4 Preliminary analysis

Preliminarily analyze the main pollution-producing links during the construction period, operation period, and post-service period of the electrochemical energy storage station; for the environmental impact factors that can be quantified, the pollution intensity shall be estimated, and if recycling is available, measures and suggestions for recycling shall be added.