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Safety requirements for electric energy storage equipment

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Foreword

This Japanese Industrial Standard has been established by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee according to the proposal for establishment of Japanese Industrial Standard submitted by The Japan Electrical Manufacturers' Association (JEMA)/Japanese Standards Association (JSA) with a draft being attached, based on the provision of Article 12, paragraph (1) of the Industrial Standardization Act. This Standard replaces **JIS C 4412-1** : 2014 and **JIS C 4412-2** : 2019, which have been withdrawn.

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Safety requirements for electric energy storage equipment

Introduction

This Japanese Industrial Standard has been prepared based on **IEC 62909-1** : 2017, Edition 1; this Standard derives only the safety requirements of storage systems from the said **IEC** while changing some of the technical contents in consideration of the local condition of power distribution in Japan.

Annex JA and Annex JB are unique to **JIS** and not given in the corresponding International Standard. The vertical lines on both sides and dotted underlines indicate changes from the corresponding International Standard. A list of modifications with the explanations is given in Annex JC.

1 Scope

This Standard specifies the safety requirements for equipment of low voltage energy storage systems provided with an integral or separate storage battery (hereafter referred to as the energy storage system).

This Standard covers the energy storage systems used for supplying backup power to loading apparatuses in equipment in the event of the equipment having a power failure, for peak shaving and peak load shifting (for using charged power at a peak period), for virtual power plant (VPP), for demand response, etc.

This Standard is used together with **JIS C 62477-1** : 2017. In applying the cited parts of **JIS C 62477-1** : 2017 in this Standard, the term "PECS" shall be replaced with "energy storage system". For Annex A, Annex D, Annex H and Annex N of this Standard, the respective corresponding annexes of **JIS C 62477-1** : 2017 shall apply.

This Standard covers either of the following.

- Stand-alone system of AC input voltage of 600 V or less or DC input voltage of 750 V or less which receives power from a low-voltage distribution system and supplies power from an output terminal or socket outlet.
- Grid connection system of AC output voltage of 600 V or less or DC input/output voltage of 750 V or less which supplies power through the wiring of equipment via a distribution board by connecting a low-voltage distribution system

However, this Standard does not specify requirements concerning grid connection protection function.

This Standard does not cover uninterruptible power supply systems, which fall under the scope of **JIS C 4411** (all parts).

NOTE 1 The discharge time of an energy storage system is not specified as it depends on the capacity and number of loading apparatuses to be connected, as well as on the degree of aged deterioration of the storage

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