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PEOPLE'S REPUBLIC OF CHINA**

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**Technical requirements for the measurement and verification of
power savings in demand response**

电力用户需求响应节约电力测量与验证技术要求

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009. Please note that some of the contents of this document may involve patents. The issuing organization of this document is not responsible for identifying these patents. This standard was proposed by the China Electricity Council. This standard is under the jurisdiction of the National Smart Grid User Interface Standardization Technical Committee (SAC/TC549). This standard is mainly drafted by: China Electric Power Research Institute Co., Ltd., State Grid Co., Ltd., China Electrical Engineering Society, National Development and Reform Commission, Southeast University, North China Electric Power University, China Southern Power Grid Co., Ltd., State Grid Shanghai Electric Power Company, State Grid Jiangsu Electric Power Co., Ltd., State Grid Weibei Electric Power Co., Ltd., State Grid Zhejiang Electric Power Co., Ltd., State Grid Hebei Electric Power Co., Ltd. Network Shandong Electric Power Company, State Grid Xinjiang Electric Power Co., Ltd., State Grid Tianjin Electric Power Company, State Grid Tianjin Electric Power Company Institute, State Grid Anhui Electric Power Co., Ltd., Yantai Oriental Weston Electric Co., Ltd. The main drafters of this standard. Chen Songsong, He Sheng, Yan Huaguang, Zhao Jianjun, Gao Ciwei, Li Dezhi, Sun Dinghao, Zhang Jing, Qi Bing, Wang Hailong, Zhao Jianshe, Zhang Xinghua, Duan Weiguo, Zhang Mingming, Yang Bin, Wang Xin, Sun Beibei, Zhong Ming, Jiang Limin, Liu Qiang, Zhang Kai, Zhu Weiwei, Zhang Haijing, Ma Lei, Zhang Jian, Wang Xudong, Zhang Yiwei, Zuo Songlin, Liu Zhong, Zhang Chao, Wang Diantao. Power user demand response saving power measurement and verification skills requirement

1 Scope

China's national standard for measuring and verifying the power savings achieved through demand response. It specifies the terms and definitions, the measurement and verification process, the algorithms and the requirements. Demand response is the arrangement by

which a consumer is paid to reduce load when the grid is short, and it has become a serious resource as wind and solar have grown, because it is far cheaper than building generation for a few hours a year. The whole scheme rests on one awkward measurement: how much did the consumer reduce. That cannot be measured directly, because it is the difference between what they used and what they would have used - and the counterfactual never happened. So it is estimated from a baseline built from the consumer's own recent consumption, adjusted for weather and for the day of the week. Everything about the fairness of the market depends on that algorithm, since a generous baseline pays for savings that were not made.

This standard specifies the procedures, algorithms, requirements and methods for power user demand response to save power measurement and verification. This standard applies to the measurement and verification of power saving in demand response projects.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article. Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 32672-2016 General technical specifications for power demand response systems

3 Terms and definitions

The following terms and definitions as defined in GB/T 32672-2016 apply to this document. For ease of use, the following is repeated Some terms and definitions in GB/T 32672-2016.

3.1 Demand response demandresponse;DR Power users respond to price signals or incentives issued by implementing agencies and change a participatory behavior of power consumption patterns.

3.2 Demand response period demandresponseperiod The power user participates in adjusting the time period of the power load according to the demand response event requirement.

3.3 Demand response day demandresponseday Power users respond to incident requests and change the day of power consumption behavior.

3.4 User baseline load user'sbaselineload When the user does not implement the demand response during the demand response period, the calculated load curve is calculated according to a certain period of time.

3.5 Energy saving The value obtained by using the user's baseline load average and the user's measured load average of the demand response period; if the difference is negative, then the section The power is about "zero."

3.6 Day type daytype Determine the type of a date, including workdays and non-working days, according to statutory arrangements.

4 Measurement and verification process

The process of demand response saving power measurement and verification is as follows:

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