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Statistical methods for heating operation data

供热运营数据统计方法

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Foreword

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1 Scope

China's national standard for the statistical treatment of district heating operation data. District heating serves the northern Chinese cities on a scale unmatched anywhere, and the data a network produces - flow, temperature, pressure and heat at thousands of substations, hourly, through a season - is the basis for every operational and investment decision made about it. The statistical questions are specific to the application. Consumption has to be normalised for weather before two seasons or two buildings can be compared, which means degree-day correction and its limitations. Losses have to be separated into the heat lost from the network and the heat delivered but unmetered. And the indicators that matter - the specific consumption per square metre, the return temperature, the flow rate per unit of heat - are the ones that reveal whether a system is balanced, which is where most district heating waste is found.

This document stipulates the basic requirements for statistical methods of heating operation data, heating unit information, basic information of heating facilities, heating unit economics operating data, heating operation data and rural heating data. This document is suitable for heating operation data statistics of civil buildings, industrial buildings and industrial production.

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, the dated quotations For undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document.

GB/T 33833-2017 Urban heating services

GB/T 51161-2016 Civil Building Energy Consumption Standard

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 heating system A general term for facilities that supply heat energy from a heat source to heat users through a heating pipe network.

3.2 cogeneration Thermal power plants produce electrical energy and usable thermal energy at the same time, realizing a joint production method of energy cascade utilization.

3.3 A centralized heating system with two or more heat sources, and an operation mode in which the heating pipe network is interconnected.

3.4 stand-byheatsource A heat source that is put into operation under emergency conditions such as accident conditions and abnormal weather conditions.

3.5 It is arranged near the user, uses gas as the primary energy to generate electricity, and uses the waste heat of power generation for cooling and heating, and at the same time outputs electric energy to the user. Hot (cold) distributed energy supply system.

Note. Referred to as "joint supply system".

3.6 heatuser heatconsumer Units or residents that obtain heat energy from the heating system.