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**NATIONAL STANDARD OF THE
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**Economic evaluation of power quality - Part 1: Economic
evaluation method for the end-users**

电能质量经济性评估 第1部分：电力用户的经济性评估方法

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Foreword

"Power Quality and Economic Evaluation" is divided into three parts.

- Part 1. Economic assessment of power users (GB /Z 32880.1);
- Part 2. Economic evaluation of public distribution networks (GB /Z 32880.2);
- Part 3. Methods of data collection (GB/T 32880.3).

This section is the first part of "Power Quality and Economic Evaluation".

This section drafted in accordance with GB/T 1.1-2009 given rules.

Please note that some of this document may be patentable. The issuing agencies of this document do not bear the responsibility of identifying these patents.

This part is proposed and managed by the National Standardization Technical Committee of Voltage and Current Ratings and Frequency (SAC/TC1).

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Power Quality and Economic Evaluation

Part 1. Economic evaluation methods for power users

1 Scope

This section standardizes the power users of the power quality and economic evaluation principles, economic costs, economic loss assessment methods, governance programs

Economic assessment methods, assessment processes and assessment indicators.

This section of the assessment of economic losses is limited to direct economic losses caused by power quality problems and power quality problems caused by the number of products less

Indirect economic loss caused by less or forming defective products.

This section applies to electricity users power quality and economic evaluation.

2 Terms and definitions

The following terms and definitions apply to this document.

2.1 Power quality powerquality; qualityofpowersystem

Electrical characteristics of the power system at the designated point, relates to the power supply equipment for normal operation (or operation) of the voltage and current indicators of deviation from the base

The degree of quasi-technical parameters.

Note: The reference specifications generally refer to the value of the indicator under ideal power conditions. These parameters may relate to the compatibility between supply and load.

[GB/T 32507-2016, Definition 2.1.1]

2.2 Voltage dips voltage dip (sag)

The root mean square value of power frequency voltage suddenly drops to $0.1\text{pu} \sim 0.9\text{pu}$ in power system, and after $10\text{ms} \sim 1\text{min}$

Return to normal phenomenon.

Note: The IEC standard is reduced to the range of $0.01\text{pu} \sim 0.9\text{pu}$.

[GB/T 30137-2013, Definition 3.1]

2.3 Short interruption of short interruptions

The root mean square value of power frequency voltage at a certain point in the power system suddenly drops below 0.1pu and resumes after a brief period of $10\text{ms} \sim 1\text{min}$ normal phenomenon.

[GB/T 30137-2013, Definition 3.2]

2.4 Harmonic (component) harmonic

The non-sinusoidal periodic Fourier series decomposition, the frequency of the fundamental frequency is an integer multiple of the sine component.

[GB/T 32507-2016, Definition 2.6.7]

2.5 Interharmonic (component)

The periodic exchange of Fourier series decomposition, the frequency is not equal to an integral multiple of the fundamental frequency component.

[GB/T 24337-1993, Definition 3.6]