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

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**Smart community infrastructures - Directives for smart
transportation using battery-powered buses for passenger
services**

智慧城市基础设施 智慧交通中纯电动公共汽车运营导则

(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting is required.

This document is equivalent to ISO 37158:2019 "Smart city infrastructure - Smart transport using electric buses".

The following minimal editorial changes were made to this document.

To coordinate with the existing standards, the name of the standard will be changed to "Smart City Infrastructure Smart Transportation Pure Electric Bus Operation Guidelines;

Changed references. -

Introduction

Urban centers are generally limited in area, but are often filled with various types of fuel vehicles, which has led to increasingly serious urban problems such as fuel Air pollution and greenhouse gas emissions caused by combustion, vibration and noise during the operation of fuel vehicles, etc., which disturb the lives of residents.

Urban public transportation system provides residents with a convenient and fast way to

travel. In order to further realize the urban Sustainable development goals, traditional fuel buses are gradually changing to pure electric buses. Compared with fuel buses, pure electric Without changing the existing bus operation mode and conditions, buses can achieve more efficient energy conversion efficiency and bring more convenience to passengers.

It provides a quieter, more comfortable and safer riding environment. Meanwhile, the addition of wireless Wi-Fi, mobile phone charging, smart APP and other functions further enriches the it enriches the travel experience of passengers. Therefore, pure electric buses have become the best choice for urban road public transportation passenger vehicles.

This document provides a guide for the transformation of domestic cities from traditional fuel bus transportation system to pure electric bus transportation system from an operational perspective.

The basic guiding principles are to maintain or improve the performance and quality of existing road public transportation services while reducing environmental impact, Make positive contributions to promoting the sustainable development of urban transportation by improving operational safety and stability, enhancing passenger riding comfort, etc.

Smart City Infrastructure Smart Transportation Pure Electric Bus Operation Guidelines

1 Scope

This document specifies the process of using pure electric buses to provide passenger transportation services in urban center smart transportation.

It brings clean air, a relatively quiet environment, and a safe and comfortable riding experience to the people.

This document is applicable to passenger service agencies and related parties that use pure electric buses in smart transportation.

2 Normative references

This document has no normative references.

3 Terms and definitions

The following terms and definitions apply to this document.

Battery-powered bus

The bus is powered by electricity using onboard rechargeable batteries as the sole source of power.

Rechargeable battery A battery that can be fully charged within the allowed waiting time to

supply power for the next vehicle operation.

Note: The battery charging time of pure electric buses does not change the existing bus service schedule, so as to ensure that existing non-pure electric buses can be simply Smoothly replaced with pure electric buses.

recharging

The process of re-supplying power to a pure electric bus (3.1).

Note: Charging can be accomplished by directly applying voltage to the vehicle battery, or by replacing a discharged battery with a fully charged one within the allowed waiting time.

Without affecting the existing bus operations, wireless charging of onboard batteries during the operation of pure electric buses is also an option.

Select the method.

4 General

4.1

Pure electric buses are powered by electric power from a traction motor.

Note: The motor of a pure electric bus can very efficiently generate electricity from chemical energy (coal, fuel oil, etc.), new energy (hydropower, nuclear energy, wind energy, etc.) the electric energy is indirectly converted into driving force. Therefore, compared with direct internal combustion engine traction, electric motor traction is more energy-efficient and does not produce pollutants or or emit greenhouse gases into the air (see Appendix A, Appendix B and Appendix C for typical cases).

4.2

The use of pure electric buses should not change the existing road public transportation operation system, including the use of internal combustion engine-driven fuel buses.

Operations-related work schedules, dispatch and facilities, etc.

4.3

The use of pure electric buses should be able to further solve and optimize the greenhouse gas emissions and air pollution caused by traditional fuel buses.

Urban problems such as pollution, vibration and noise.