ICS 13.020.10
CCS Z04

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 45149-2025

Technical specification at the project level for assessment of greenhouse gas emission reductions - Biomass power generation and cogeneration project

基于项目的温室气体减排量评估技术规范 生物质发电及热电联产项目

Issued on: January 24, 2025 **Implemented on: January 24, 2025**

Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC

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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. Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents. This document was proposed by the National Technical Committee for Environmental Management Standardization. This document was prepared by the National Environmental Management Standardization Technical Committee (SAC/TC207) and the National Carbon Emission Management Standardization Technical Committee (SAC/TC548) jointly managed. This document was drafted by: China Industrial Development Promotion Association, China National Institute of Standardization, China Energy Conservation Big Data Co., Ltd., Shenzhen Energy and Environmental Protection Co., Ltd., China Huadian Corporation, Shanghai Kangheng Environmental Protection Co., Ltd., CECEP (Beijing) Energy Conservation and Environmental Protection Engineering Co., Ltd., Hanlan Environmental Co., Ltd., Guangdong Energy Group Energy Conservation and Carbon Reduction Co., Ltd., Shanghai Environmental Sanitation Engineering Design Institute Co., Ltd. Harbin Power Plant Equipment Design Institute Co., Ltd., Chengfa Environment Co., Ltd., Longji Energy Group Co., Ltd., Lionson Energy Co., Ltd., Inner Mongolia Yili Industrial Group Co., Ltd., Beijing Songshan Low Carbon Technology Research Institute Co., Ltd., Shandong Hai Li & Fung Smart Energy Technology Group Co., Ltd., Wuhan Senyuan Blue Sky Environmental Technology Engineering Co., Ltd., Shenzhen Shengshi Environmental Technology Co., Ltd. Company, Zhejiang Chunhui Environmental Protection Energy Co., Ltd., Dongfang Boiler Co., Ltd. of Dongfang Electric Corporation, Zhonghuan United (Beijing) Certification Co., Ltd. Heart Co., Ltd., Sichuan Development Green and Low-Carbon Technology Co., Ltd.

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1 Scope

GB/T 45149-2025 is the Chinese project-level methodology for assessing greenhouse gas emission reductions from biomass power generation and combined heat and power projects. Biomass energy is the case where accounting decides everything: the carbon dioxide from combustion is biogenic and not counted, so the credit rests entirely on what the fuel and the displaced electricity would otherwise have been, whether the straw would have been burnt in the field or left to decay, whether the grid electricity displaced is the average or the marginal mix, and whether the biomass is genuinely a residue rather than a purpose-grown crop displacing other land use. The standard addresses each of these. It sets the project boundary, the identification of emission sources and the determination of which greenhouse gases are covered, the determination of the baseline scenario, the calculation of the emission reduction with its baseline, project and leakage terms, the monitoring requirements and the assessment report. It took effect on 24 January 2025.

This document specifies the boundaries, emission source identification, greenhouse gas emission reduction assessment for biomass power generation and cogeneration projects. Determination of body types, determination of baseline scenarios, calculation of emission reductions, monitoring and data quality management, and preparation of emission reduction assessment reports. This document applies to greenhouse gas emission reduction projects of agricultural and forestry biomass direct combustion power generation and cogeneration projects, domestic waste incineration power generation and cogeneration projects. Assessment of emissions reductions. This document is not applicable to the assessment of greenhouse gas emission reductions for biogas power generation and cogeneration projects.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This

document.

GB/T 32150-2015 General principles for accounting and reporting of greenhouse gas emissions from industrial enterprises

GB/T 33760-2017 General requirements for project-based greenhouse gas emission reduction assessment technical specifications

GB 50869-2013 Technical specification for sanitary landfill treatment of domestic waste

HJ2016-2012 Environmental Engineering Terminology

3 Terms and definitions

GB/T 32150-2015, GB/T 33760-2017, GB 50869-2013 and HJ2016-2012 and the following terms The following terms and definitions apply to this document.

3.1 Baseline scenario baseline scenario A hypothetical scenario that might occur if the project is not implemented, used to provide a reference. [Source: GB/T 33760-2017, 3.4]

3.2 The calculated reduction in greenhouse gas emissions generated by a project over a certain period of time compared to the emissions in the baseline scenario. [Source: GB/T 33760-2017, 3.5]

3.3 Emission factor A coefficient that characterizes greenhouse gas emissions per unit of production or consumption activity. [Source: GB/T 32150-2015, 3.13]

3.4 The time period during which an application for registration of project emission reductions may be made.