ICS 13.020.10
CCS Z 04

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 47296-2026

Technical specification for project-level assessment of greenhouse gas emission reductions - Biomethane projects

基于项目的温室气体减排量评估技术规范 生物天然气工程

Issued on: March 31, 2026 **Implemented on: October 1, 2026**

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

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the Ministry of Agriculture and Rural Affairs of the People's Republic of China. This document was prepared by the National Biogas Standardization Technical Committee (SAC/TC515) and the National Carbon Emission Management Standardization Technical Committee. (SAC/TC548) jointly under the jurisdiction of the State Administration of Taxation. This document was drafted by: the National Agricultural Ecology and Resources Protection Center of the Ministry of Agriculture and Rural Affairs, and the Institute of Agricultural Environment and Sustainable Development of the Chinese Academy of Agricultural Sciences. Research Institute, China Agricultural University, Chengdu Biogas Research Institute of the Ministry of Agriculture and Rural Affairs, Oil and Gas and New Energy Branch of China National Petroleum Corporation The company, Sinopec New Star (Beijing) New Energy Development Co., Ltd., Daqing Oilfield Design Institute Co., Ltd., and Beijing United Youfa Energy Technology Co., Ltd. The company, China Huadian Engineering & Technology Group Co., Ltd., Hong Kong and China Gas Investment Co., Ltd., and Southwest Oil & Gas Field Branch of China National Petroleum Corporation. Company, Carbon Technology (Beijing) Co., Ltd., Shanghai Shenji Environmental Technology Co., Ltd., Jing'an Ecological Technology Group Co., Ltd., Environmental Bridge (Shanghai) Environmental Technology Co., Ltd., Beijing Wanmu Ecological Environmental Protection Development Co., Ltd., Guangzhou Huidi New Energy Technology Co., Ltd., Hefei Marriott Energy Equipment Co., Ltd., China Petroleum & Chemical Corporation Natural Gas Branch, Tangshan Luyuan Environmental Protection Technology Co., Ltd., Hebei Wansheng Environmental Protection Engineering Co., Ltd., Shanghai Yiwei Industrial Technology Co., Ltd., and Beijing Samsung Jiuqian Certification Center Co., Ltd. The main drafters of this document are. Dong Baocheng, Xu Wenyong, Meng Haibo, Ma Jianguo, Miao Tiantian, Wei

Sha, Dong Renjie, Liu Feng, Yuan Liangqing, and Guo Jianbin. Li Bingfeng, Luo Tao, Tang Chao, Xiong Bo, Tan Zhiwei, Zhang Zhongliang, Ma Zonghu, Liu Guoqiang, Jing Xingsheng, Li Yan, Guan Beibei, Yao Hongying, Shi Haiting, Zhu Jie Wei Zhihua, Xi Dan, Sun Jianhong, Gao Zhiwen, Zhang Jianping, Yao Hao, Wei Yong, Shi Hui, Tang Shi, Tang Dali, Li Yunzhe, Wei Xinyu, Chen Qiuwen, Tian Xueli Liu Xin, Chen Jiongshan, Xu Wei, Li Yugui, Zhang Liuyu, Zao Huijie, Xi Haihong, Li Jian, Ding Zhiwei, Zhou Pei, Ma Qi, Hu Kailin, Feng Congcong, Yang Ye, Liao Xiaoning, Yang Fan, Zhang Wei.

To facilitate domestic and international exchange, and in accordance with the relevant requirements of the Intergovernmental Panel on Climate Change (IPCC), the values in this document are... It is expressed in the form of "International Units of Measurement (Units of Measurement) of substances (elements)," such as tCO2e, which represents tons of carbon dioxide equivalent; kgVS, which represents kilograms of volatile organic compounds. Solid content; tCH4, representing tons of methane; m3CH4, representing cubic meters of methane; tCO2, representing tons of carbon dioxide; tCOD, representing tons of chemical oxygen demand. Quantity; tN2O, representing tons of nitrous oxide; kgN2O-N, representing nitrogen in kilograms of nitrous oxide; kgN, representing kilograms of nitrogen; kgNH3-N and NOx- N represents the nitrogen in kilograms of ammonia and nitrogen oxides. Project-based assessment of greenhouse gas emission reductions Technical Specifications for Biogas Engineering

1 Scope

GB/T 47296-2026 is the Chinese national standard covering how the reduction from a biomethane plant is quantified - the methane that would have escaped from the manure or waste anyway, the fossil gas displaced, the parasitic energy of the digester and the upgrading, and the leakage from the plant itself. The avoided methane is usually larger than the displaced fossil carbon, which is what makes these projects worth doing and what makes the accounting worth getting right. First edition, 22,000 words, in force since 1 October 2026. It was issued on 31 March 2026 and takes effect on 1 October 2026, as a first edition. The document is under the responsibility of the Ministry of Agriculture and Rural Affairs. This page is published from the official record of the 2026 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document specifies the project boundaries, emission source identification, and baseline scenario for greenhouse gas emission reduction assessments of biogas engineering projects. Requirements for emission reduction calculation, project monitoring and data quality management, and assessment report preparation are outlined, along with corresponding accounting methods. This document applies to the assessment of greenhouse gas emission reductions for newly built, renovated, and expanded biogas and biomethane projects. Other biomass fuels... This should be used as a reference for

assessing greenhouse gas emission reductions in gas engineering projects.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document. GB 17820 Natural Gas

GB/T 32150 General Rules for Greenhouse Gas Emission Accounting and Reporting by Industrial Enterprises

GB/T 33760 General Requirements for Technical Specifications of Project-Based Greenhouse Gas Emission Reduction Assessment

3 Terms and Definitions

The terms and definitions defined in GB/T 32150 and GB/T 33760, as well as the following terms and definitions, apply to this document.

3.1 anaerobic digestion The process by which microorganisms decompose organic matter and produce biogas under anaerobic conditions. [Source: GB/T 40506-2021, 5.2.1]

3.2 Biomass-derived fuel gas Combustible gas produced from biomass through thermochemical or biochemical conversion.

Note. In this document, biomass fuel gas refers to methane, a combustible gas produced through biochemical conversion. [Source: GB/T 40506-2021, 3.3]

3.3 biomethane Biomass gas, obtained through reforming, separation, and purification, is primarily composed of methane and conforms to the requirements of GB 17820. gas.

Note. Biomass gas in this document includes biogas and biomethane obtained after separation and purification of biogas. [Source: GB/T 40506-2021, 3.4]