



The International Tracking Standard Foundation

Founder of I-REC

COUNTRY ASSESSMENT REPORT CHINA

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Introduction

The purpose of a country report is to both justify the introduction of I-TRACK for Biogas and Biomethane (I-TRACK(G)) Product Code in a particular country and determine and document any conditions that may be applied to the provision of certification services within that country.

Country reports are a result of active collaboration and engagement among knowledgeable public and private stakeholders in the biogas and biomethane sector to enhance information exchange and validate the main principles and assumptions for the implementation of I-TRACK(G) Code are met.

Wherever possible, the Code Manager (Green Gas Tracking) and the International Tracking Standard Foundation (I-TRACK Foundation) shall seek to engage with governments in the provision of certification services on a given country. Furthermore, no I-TRACK(G) certificate will be issued where a government has instructed the I-TRACK Foundation or the Code Manager not to do so.

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1.1 Country Assessment Report Template

Country Name | People's Republic of China

1.2 Production and Demand of Natural Gas, Biogas and Biomethane

Describe, based on the latest available data, the production and demand (eg: technologies, sources or feedstock) of natural gas, biogas and biomethane sectors in the country. Use the table below as an example.

Biomethane sectors in the country. Use the table below as an example.				
Production	Source	Number of plants or facilities	Annual production ¹ (MM BTU or Nm ³)	
Natural gas	There are 150 sedimentary basins	Sichuan gas field, Xinjiang gas field, Shaanxi-Gansu-Ningxia gas fields, Bohai Bay, Songliao, and South China Sea regions.	261.89 billion m ³	
Biogas	As mentioned in "the China Biogas Industry Dual Carbon Development Report-Biomethane Production Chapter 2024", the present scale of Chinese biogas industry is 28 billion m ³ , which is equivalent to 16.75 billion m ³ Biomethane. Actual biomethane production capacity achieved is 5.45 billion m ³ . Chinese biomethane industry is divided into the three primary sectors: agriculture and rural areas, urban areas, and industrial area.		Biogas Production (billion m ³) ³	Total
			16.1	
			7.43	
			8.67	
			3.32	
			0.19	
			0.75	
			2.38	

¹ Clear conversion between volume and energy units enhances interoperability and enable global trade. For biomethane two key unit systems • Volume-based units: normal cubic meters (Nm³), adjusted for methane purity, reflect physical quantity and infrastructure compatibility. Energy-based units: MMBtu or GJ measure standardized energy content, according to the methane specific lower or higher heating value. According to the International Energy Agency, biomethane has a lower heating value (LHV) of around 36 MJ/m³.

³ Official Chinese statistics on biogas are all reported in cubic meters (m³) at 20 degrees Celsius and standard atmospheric pressure.

Biomethane	Industrial area	Industrial area	8.5	
	<i>Light industrial wastewater</i>	1730	-	
	<i>Non Light industrial wastewater</i>	1070	-	27.92
	Agriculture and rural areas	Biomethane Facilities	Biomethane Production (billion m³)	Total
	Urban area	Agriculture and rural areas	0.483	
	Industrial area	64 ²		
		Urban area	1.394⁴	
		-	-	
		Industrial area	3.57estimated⁵	
		-	-	5.447
	Total			
Demand (Natural gas)	Sector	Demand (MM BTU or Nm³)		
2025	<i>Residential</i>	93.84 billion m³		
	<i>Commercial/Service/Public Sector</i>	59.72 billion m³		
	<i>Transport</i>	21.33 billion m³		
	<i>Industrial</i>	162.09 billion m³		
	<i>Agriculture</i>	4.27 billion m³		
	<i>Electricity</i>	76.78 billion m³		
	<i>Other Primary Activities</i>	8.53 billion m³		
	Total	426.55 billion m³		
Other relevant information or further clarification of the table above.				

1.3 Gas Grid Interconnections and General Import/Export Activity

Complete for all interconnected countries based on the latest available data.

Connected country	Associated Infrastructure	Annual import from country (MM BTU or m ³)	Annual export to country (MM BTU or m ³)
Russia	LNG + Pipeline Natural Gas	49.23 billion m ³	
Turkmenistan	Pipeline Natural Gas	26.5 billion m ³	
Australia	LNG	29.97 billion m ³	
Qatar	LNG	28.77 billion m ³	
Malaysia	LNG	10.69 billion m ³	
Myanmar	Pipeline Natural Gas	3.09 billion m ³	
Total import		148.25 billion m³	

² 64 Large-Scale Biomethane Demonstration Projects from 2015 to 2017.

⁴ The data are not an estimate of long-term development potential. This is estimated from the current biogas projects in Urban field. Around 70% of these projects can be rapidly transformed into biomethane projects in the near term.

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1.4 Market Structure

Complete based on latest available data. This section should describe the structure of the national natural gas and biomethane/biogas markets and any existing markets for environmental attribute products, including local certificate systems, and main incentive regulation driving market development. Include key characteristics such as the types of production (e.g., feedstock, technologies), market participants (producers, distributors, suppliers), how biomethane/biogas is traded or sold (e.g., wholesale, bilateral contracts, retail, virtual pipelines), and the level of market liberalization/integration. Reference any relevant statistics on biomethane/biogas, installed capacity, and market share of different feedstock sources.

The Chinese natural gas market is distinguished by its net imports, with pipeline natural gas (PNG) and liquefied natural gas (LNG) constituting the predominant import categories. By 2025, total imports are projected to reach 148.25 billion m³. The biomethane/biogas market is currently undergoing a critical phase of transition from policy-driven to market-oriented development. As a green supplement to natural gas, its annual production capacity exceeded 2.5 billion m³ in 2025 (Source: Weber Consulting's "2026 China Biomethane Industry Specialized Research and In-Depth Analysis Report").

The key incentive regulations comprise the "Guiding Opinions on Promoting the Industrial Development of Biomethane" (Fagui [2019] No. 1895), which were jointly issued on 4 December 2019 by ten government departments, including the National Development and Reform Commission, the National Energy Administration, the Ministry of Finance, the Ministry of Natural Resources, and the Ministry of Ecology and Environment. These regulations explicitly set a target of exceeding 10 billion m³ of annual biomethane production by 2025, with a gradual promotion of large-scale development of the biomethane industry, and an expectation of annual production exceeding 20 billion m³ by 2030.

Biomethane is mainly produced using a process called anaerobic fermentation, which uses a variety of materials as the starting point for the fermentation. Agricultural waste makes up 60% of the total (including 45% crop straw and 15% livestock manure), municipal organic waste makes up 30%, and forestry waste makes up 10%. The average production cost is lower than the global average.

There are three types of market participants: producers, which are mainly state-owned energy companies and specialist operators; distributors, which are mostly gas transmission pipeline companies; and suppliers, which include raw material and equipment providers. Trading models are different: large-scale projects mostly use wholesale and long-term contracts with only one other company, while small and medium-sized projects use retail operations through virtual pipelines. The natural gas market is now connected across different regions, with pipelines stretching a total of 130,000 kilometres. The biomethane market is still growing, but this is not happening evenly across the country. However, it is gradually becoming part of the natural gas pipeline network, and this is expected to improve in the future.

1.5 Responsible Government Department

Complete based on latest available data. Identify and briefly describe the government ministries, departments, or regulatory bodies with authority over the natural gas and biomethane/biogas sector, renewable energy policy, and environmental regulation. Indicate their roles in the oversight, support, or regulation of biomethane/biogas markets and attribute tracking systems. Examples may include the energy or agricultural ministry, environment agency, or national utility regulators. Specify if any agency acts as the official contact point for certification or environmental attributes.

Key Regulatory Bodies and Their Functions in China's Natural Gas and Biogas Sectors

- 1. National Development and Reform Commission (NDRC):** The NDRC coordinates industrial planning, formulates policies, and promotes the integration of biogas into the natural gas system.
- 2. National Energy Administration (NEA):** Regulates the entire natural gas supply chain, develops biogas plans, and promotes demonstration projects.
- 3. Ministry of Ecology and Environment:** Oversees the environmental aspects of biomethane, establishes emission control systems, and refines CCER methodologies.
- 4. Ministry of Agriculture and Rural Affairs (Primary Regulator):** It coordinates rural biomethane development, and its core functions include:
 - **Feedstock Security:** It coordinates the utilization of agricultural waste and implements relevant policies and funding.
 - **Project Construction:** Supports project construction and implements land use incentives.

- *Technical Support:* In collaboration with the Biogas Research Institute, conducts technology research and development and promotion.
- *Standards and Mechanisms:* Improves relevant standards and promotes the inclusion of projects in CCER trading.
- *Policy Oversight:* Implement preferential policies, strengthen supervision, and promote the industry's transition to a market-oriented model.

The China Biogas Society is affiliated with the National Station for Agricultural Ecology and Resource Conservation, which is under the jurisdiction of the Ministry of Agriculture and Rural Affairs. It is guided by the Ministry and supports its related work. The Society's main role in the **Green Gas Certification** program is to provide technical support and help the industry work together. Its main responsibilities include helping to develop standards, organizing certification seminars, creating platforms for exchange, and offering technical verification and emissions reduction calculation support to ensure the professionalism and authority of the certification.

1.6 Existing/Planned Legislation

Complete based on latest available data. Summarize existing or upcoming legislation that may have an impact on the issuance or recognition of environmental attribute products, including I-TRACK(G). Include laws and policies covering biogas/biomethane market operation, energy regulation, biogas/biomethane mandates, waste recovery/treatment or national climate goals. Highlight if the legislation explicitly supports or restricts the use of environmental certificates, or if there is any ambiguity that could affect system implementation. Mention if any new legislation is currently in development or being reviewed.

Chinese relevant legislation primarily focuses on policy support. The "Guiding Opinions on Promoting the Industrial Development of Biogas" explicitly support the development of biomethane. In 2025, two CCER-related methodologies⁶ were published with the aim of facilitating their integration into the carbon trading system. Furthermore, the Ministry of Ecology and Environment has issued a methane emission control plan with the aim of strengthening environmental oversight. China has not yet implemented mandatory quota policies, nor has any legislation related to I-TRACK(G) been identified. Existing legal provisions explicitly support the use of environmental certificates; however, issues such as an imperfect trading mechanism for green gas certificates remain, and there is currently no new legislation under consideration.

1.7 Environmental and Biomethane or Biogas Legislation

Complete based on latest available data. Provide an overview of key national laws and regulations specifically targeting environmental protection, climate change mitigation, and renewable energy development. Include national targets for renewable energy, greenhouse gas emissions (eg: bilateral agreements with other countries), waste recovery/treatment or energy transition timelines. Identify whether the legal framework enables or restricts biomethane/biogas tracking mechanisms or certificate-based support systems. Specify if any policies require disclosure or verification of biomethane/biogas usage.

The most important laws for the whole country are the Environmental Protection Law and the Renewable Energy Law. The plan is to cut the most polluting emissions by 2030 and reach a point where the country's carbon emissions are balanced with the carbon that is taken out of the atmosphere by 2060. By 2025, China targeted to use 4 billion tons of bulk solid waste every year, and 450 million tons of recyclable resources. The target for biomethane is 20 billion m³ by 2030.

The legal framework promotes a biomethane traceability and certification system; China is participating in the drafting of ISO international standards for biogas; CCER projects require verification of emission reductions; there are no mandatory disclosure requirements for end-use.

⁶ Biogas Recovery and Utilization Project for Manure from Large-Scale Pig Farms (CCER—15—001—V01)
<https://www.mee.gov.cn/xxgk2018/xxgk/xxgk06/202512/W020251217597963017926.pdf>

Centralized Treatment Project of Agricultural Wastes (CCER—15—002—V01)
<https://www.mee.gov.cn/xxgk2018/xxgk/xxgk06/202512/W020251217597964250471.pdf>

1.8 Existing/Planned Certificate or Support Systems

Complete based on latest available data. This section should describe policy frameworks or programs that affect environmental attribute ownership, use, or transfer such as existing certificate systems (eg: carbon credit/offset), support schemes, or relevant energy/environmental regulations. Include any restrictions on registry use or standard adoption that could impact I-TRACK(G) issuance.

The Ministry of Ecology and Environment and the State Administration for Market Regulation announced and started the rules for the Certified Voluntary Emission Reductions (CCER) mechanism on 19 October 2023. Biogas Recovery and Utilisation Projects in Large-Scale Pig Farms" (CCER-15-001 —V01) and the "Methodology for Voluntary Greenhouse Gas Emission Reduction Projects: Centralized Agricultural Waste Treatment Projects" (CCER—15—002—V01), which were officially released in December 2025. No biogas CCER projects have been registered by the end of March 2026.

China has set up a green certification system for biomethane. The system is based on three industry standards, all of which were issued by the China Rural Energy Industry Association and put into action on 16 August 2024. These standards cover different types of biogas and biomethane projects, and provide the technical support needed for biomethane green certification. The China Rural Energy Industry Association has always been focused on the development of the rural energy sector. One of these is T/CAREI 011-2024, "General Rules for Voluntary Certification of Biomethane," which is a basic general standard. It specifies key stages such as verification and supervision, providing a unified operational benchmark for the other two specialised standards. T/CAREI 012-2024 "Technical Specifications for the Assessment of Project-Based Greenhouse Gas Emission Reductions: The focus of "Biomethane Projects" is on large-scale projects. It also makes sure that the accounting of emissions and reductions is done in the same way throughout the whole process. T/CAREI 013-2024 "Technical Specifications for the Assessment of Project-Based Greenhouse Gas Emission Reductions: Household Biogas" is for projects in rural households. It also gives technical support to the Ministry of Agriculture and Rural Affairs to improve the use of biogas in rural areas.

The Ministry of Ecology and Environment and the State Administration for Market Regulation announced and started the rules for the Certified Voluntary Emission Reductions (CCER) mechanism on 19 October 2023. Biogas Recovery and Utilisation Projects in Large-Scale Pig Farms" (CCER-15-001 —V01) and the "Methodology for Voluntary Greenhouse Gas Emission Reduction Projects: Centralized Agricultural Waste Treatment Projects" (CCER—15—002—V01), which were officially released in December 2025.

China has set up a green certification system for biomethane⁷ which is managed by China Biogas Society since 2023. 21 biogas and biomethane projects have been registered and 82196 China Green Gas certificates⁸ have been issued by the end of March 2026.

1.9 Extent of Engagement and Response with Government

Complete based on latest available data. Detail the level and nature of engagement that has occurred with the national government or relevant authorities. Include timelines, types of engagement (e.g., meetings, workshops, official correspondence), and the government's responsiveness or expressed interest. Mention any memoranda of understanding (MOUs), letters of support or non-objection, or formal working groups. This section should demonstrate the groundwork laid for the national implementation of an attribute tracking system.

Discussions regarding cooperation between the I-Track Foundation and the Ministry of Agriculture and Rural Affairs have been ongoing since 2024. The objective of these discussions is to leverage the I-Track Foundation international influence to ensure that the environmental benefits of China's biogas projects are recognized and enhanced. In 2024 and 2025, the I-Track Foundation held two to three online and in-person meetings, establishing a solid foundation for cooperation. The Foundation has also provided a Memorandum of Understanding (MoU) template, which is currently under review by the Ministry of Agriculture and Rural Affairs. It is possible that the China Biogas Society will serve as the national issuer for China depending on the results of ongoing collaboration agreements.

⁷ Biogas and Biomethane certification managed by <http://www.biomethane.com.cn/>

⁸ 1 GGC certificate equals 1 Nm³

1.10 Proposed Restrictions

Complete based on latest available data. Outline any country-specific limitations or restrictions that should be considered to preserve the environmental integrity of the tracking system and to avoid double issuance or double counting of environmental attributes. This may include restrictions on eligible production or feedstock, limitations based on infrastructure, or requirements for certain government approvals. Indicate whether certain products or participants should be excluded based on existing national practices, policies, or registry rules.

Following the implementation of the Biogas CCER project and the China Biogas and Biomethane certification, it is recommended that closed cooperation and co-recognition be established with the China Biogas Society to avoid double counting.

1.11 Any Other Relevant Information

Complete based on latest available data. Include any additional context or data that may support the assessment and decision-making process. This may cover market developments, regional initiatives, bilateral agreements, stakeholder feedback, potential risks, or lessons from other certificate systems in the country. Use this section to clarify uncertainties, flag known implementation challenges, or provide qualitative insights not covered in earlier sections.

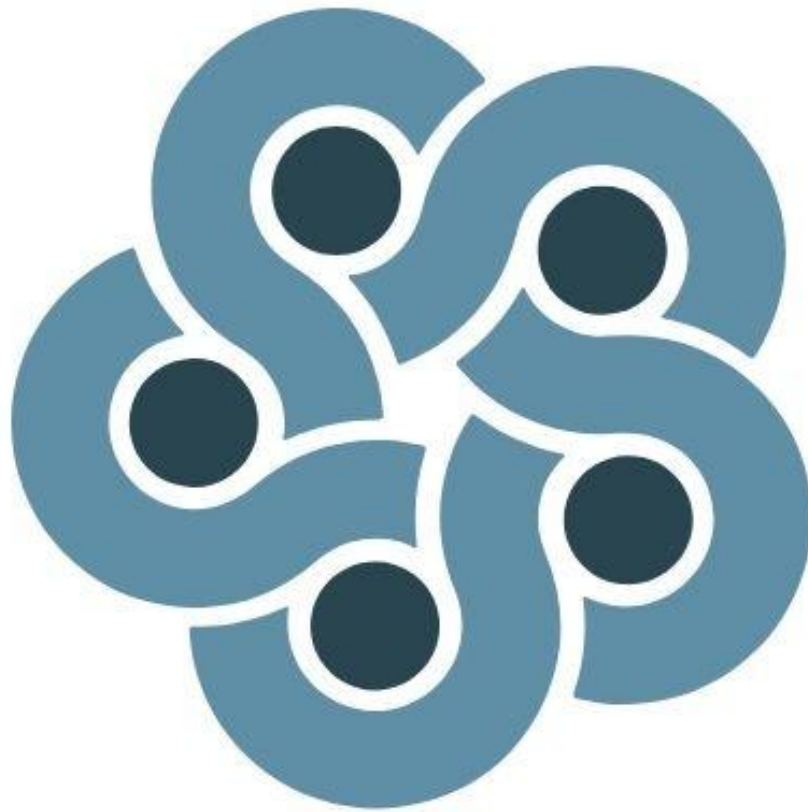
Include any recommendations to begin operating in the country (eg: local issuer, metering evidence providers).

Implementation of I-TRACK(G) will be achieved through the Green Certificate Company (GCC) as the accredited Issuer together with the Evident I-TRACK(G) Registry. As is the case in all active issuance countries, China Biogas Society could be accredited as a Local Issuer depending on the results of ongoing collaboration agreements.

1.12 Authors and contributors

Complete all fields.

Contributor name and Organization		<i>Zhenlan Li, Country manager, China, I-TRACK Foundation</i>	
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