



Sino-German Biogas Cooperation – History and Future Opportunities

中德沼气合作的历史与未来机会

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03/11/2016 1st SINO-EU 2016 Bio-Natural Gas Summit Page 1



Contents

目录

1. GIZ Profile and Key Facts
德国国际合作机构概要及大事记
2. Past Cooperation Projects
过去的合作项目
 - Sino-German Biomass Utilization Project
中德生物质能优化利用项目
3. Future Opportunities
未来机会
 - Sino-German Alliance on Bio Natural Gas
中德生物天然气示范战略联盟项目
 - China Integrated Waste Management NAMA
NAMA固体废弃物管理项目



GIZ Key Facts 德国国际合作机构大事记

- German government-owned public-benefit enterprise
德国国有的公益性企业
- Implementing international cooperation for sustainable development
执行可持续发展相关的国际合作项目
- Commissioned by well over 300 public and private-sector bodies from Germany and abroad
受来自德国和国外的超300家公共和私营实体的委托
- Operations in Germany and over 130 countries around the world
在德国和世界上130多个国家运营
- Business volume of over EUR 2.03 billion in 2014
在德国和世界上130多个国家运营
- 16,500 employees worldwide
在全球共有16500名员工



GIZ in China 德国国际合作机构（中国）



- More than 30 years experience in Sino-German technical cooperation
拥有超过30年的中德技术合作经验
- Portfolio: Policy advice, technical expertise, knowledge transfer, capacity building etc.
业务领域：政策建议、专业技术、知识转移、能力建设等
- Approx. 130 employees in China
在中国约有130名员工

Continuous adaption of project portfolio to partner requirements 应合作伙伴的要求，不断调整业务领域





Sino-German Biomass Utilization Project

中德生物质能优化利用项目

- **Project Objective 项目目标:**
The motivation for public and private investments in the generation and use of biomass energy (especially from middle-scale and large-scale biogas plants) has increased. The technical standard and operational performance of medium-scale and large-scale biogas plants that produce energy from biomass have improved.
提高个人和国家对生产和利用生物质能源（特别是大中型沼气厂）方面投资的积极性. 提高以生物质产能为目的的大中型沼气厂的技术标准和运行绩效.
- **Project Volume 项目经费:** 4.5 million Euro 450 万欧元
- **Project Duration 项目期:** 2009-2014
- **Delivery Organization 提交方:** Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
德国国际合作机构 (GIZ)
- **Chinese Partner 合作伙伴:** Foreign Economic Cooperation Center of Ministry of Agriculture
农业部对外经济合作中心





Sino-German Biomass Utilization Project

中德生物质能优化利用项目

Project Objectives 项目目标



- GIZ "Sino-German Biomass Utilization Project" GIZ 中德生物质能优化利用项目
To improve the technical standards and the (operational) performance of medium- and large-scale biogas plants that produce energy from biomass.
提高大中型沼气厂利用生物质生产能源的技术标准和（运营）。
- In the context of the ADB supported "Integrated Renewable Biomass Energy Development Sector Project" 亚行贷款农村能源生态建设二期项目
Pollution from agricultural waste is reduced and the production and use of renewable biomass energy are increased in the project area.
在项目地区降低农业废弃物污染，增加可再生生物质能源的生产和利用。
- In the context of the WB supported "Hebei Rural Renewable Energy Development Demonstration Project" 河北省利用世行贷款农村新能源开发项目
To demonstrate large scaled renewable energy development to improve the environmental conditions and generate clean energy in rural areas (mainly from XL biogas plants).
在农村地区开展大规模示范项目以改善环境条件以及生产清洁能源（主要为超大型沼气工程）。



Sino-German Biomass Utilization Project

中德生物质能优化利用项目

Achievements and Experiences 成果和经验

Demonstration Projects 示范项目

- Development of 4 demonstration projects in Heilongjiang, Henan, Beijing and Shandong.
在黑龙江, 河南, 北京 和 山东 开展4个示范项目.

Capacity Building 能力建设

- Establishment of exchange and learning platforms and technical trainings.
开展交流和学习平台以及技术培训.

Technology Innovation 技术创新

- Introduction of key technologies (e.g. fibre membran technology).
介绍关键技术 (如纤维膜技术)

Policy Recommendation 政策建议

- Development of policy recommendations and publication by EU Chamber of Commerce and MoA.
政策建议并且在中国欧盟商会和农业部发表.

Standard Preparation 标准制备

- Recommendation of standards and acceptance by the industry.
标准建议和行业接受.

Publication Manual 出版手册

- Publication of manuals and O&M curricula.
出版手册和运营管理课程.



Sino-German Alliance on Bio Natural Gas

中德生物天然气示范战略联盟项目

- **Project Objective 项目目标:**

Through the cooperation between German and Chinese companies to jointly build up bio natural gas demonstration projects in China, advanced BNG technology and management from Germany is introduced into the Chinese market, a long-term Sino-German BNG communication platform is established and the transformation and upgrading of the Chinese BNG industry is further promoted in China.

通过中德企业共同合作建设生物天然气示范项目，引进德国先进技术和管理经验，构建中德企业长效合作机制，推动中国生物天然气产业的转型升级。
- **Estimated Budget 申请经费:** > 1.5 Mio. Euro 150 万欧元
- **Implementation Time 项目执行期:** 3 years (2017-2020)
- **Implemented by 执行机构:** Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
德国国际合作机构 (GIZ)
- **Supported by 支持机构:** Federal Ministry for Economic Cooperation and Development (BMZ) 德国经合部 (BMZ)



Sino-German Alliance on Bio Natural Gas

中德生物天然气示范战略联盟项目

Planned Project Content 项目内容

Technical Assistance and Demonstration Projects 技术支持和示范项目

- Development of 3-4 BNG demonstration projects as showcase projects
建立3-4个生物天然气示范项目，以展示德国先进的技术、设备和管理。

Technical Assistance on Monitoring Systems 物联网监测系统技术支持

- Set-up of monitoring systems for verification of subsidies
采用德国先进的监测方法学和设备，用于建立和运行国家级物联网监测系统，以用于日后核准后补贴。

Capacity Building 能力建设

- Development of capacity building events (trainings, workshops, study tours).
开展一系列的能力建设活动，包括组织针对各个利益相关方的培训、研讨会以及出国考察。

Policy Support 政策支持

- Development of a new policy system (output-based subsidies).
开发针对生物天然气项目的后补贴支持政策，以提高工程的长期运行收益而不是短期投资支持。

Long-term Sino-German BNG Plattform 构建中德企业长效合作机制

- Development of a long-term cooperation platform.
通过示范项目，建立中德生物天然气企业间富有成效的合作机制，建立长效交流平台以促进未来的合作。



China Integrated Waste Management NAMA

NAMA固体废物管理项目

- **Project Outcome 项目产出:**
Public and private up-scaling throughout China's waste treatment sector is triggered by flagship cases of integrated waste management systems according to BAT and BEP which have been proven to operate financially profitable in at least 3 demonstration municipalities.
借鉴国际上已证实盈利的BAT(最佳可行技术)和BEP(最佳环境实践)的方法在中国至少3个示范城市建立垃圾综合处理系统，以此来鼓励在中国垃圾处理行业政府机构和私人企业间的合作。
- **Project Volume 项目经费:** 8 million EUR (under planning) 800 万欧元 (计划中)
- **Project Duration 项目期:** 07/2017-06/2022 (under planning) (计划中)
- **Status 项目状态:** Appraisal Phase 评估阶段
- **Delivery Organization 提交方:** Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
德国国际合作机构 (GIZ)
- **Partner Ministry 中方合作部委:** Ministry of Housing and Urban-Rural Development (MoHURD)
住房和城乡建设部
- **Implementing Partner 执行单位:** China Association of Urban Environmental Sanitation (CAUES)
中国城市环境卫生协会



China Integrated Waste Management NAMA

NAMA固体废物管理项目

NAMA Facility NAMA 基金会

is a joint initiative of:

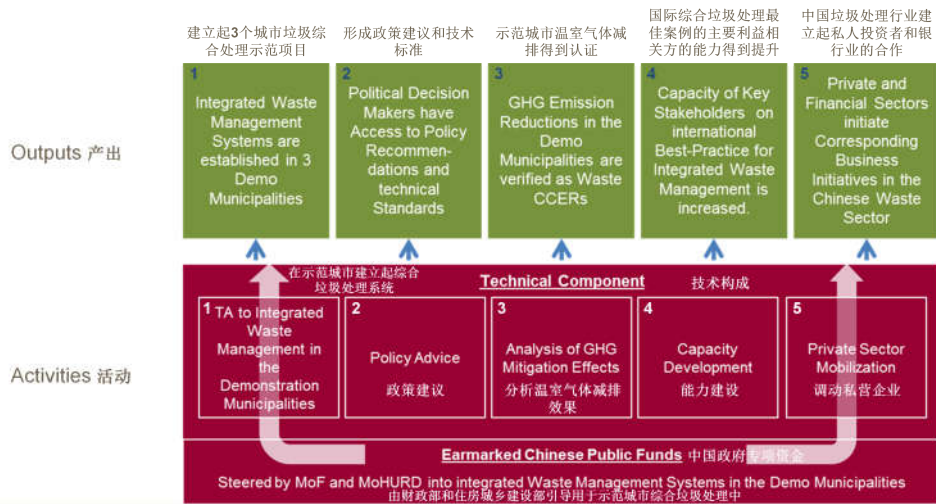
由以下单位联合发起:

- German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB)
德国联邦环境, 自然保护, 建设和核安全部
- UK's Department of Energy and Climate Change (DECC)
英国能源与气候变化部
- Danish Ministry of Energy, Utilities and Climate, Danish Ministry of Foreign Affairs (MFA)
丹麦气候、能源和建筑部
- European Commission
欧盟委员会



China Integrated Waste Management NAMA

NAMA固体废物管理项目





China Integrated Waste Management NAMA

NAMA固体废物管理项目

Outcome 产出

Public and private up-scaling throughout China's waste management sector is triggered by replicable flagship cases of integrated waste management systems and waste-to-energy technologies according to BAT and BEP that have been proven to operate in a financially sustainable way in at least 3 demonstration municipalities.

可复制的综合垃圾处理体系扩散到整个中国垃圾处理行业，带动公共和私营部门的发展，根据最佳可用技术和最佳环境实践得出的垃圾转化成能源的技术至少在3个示范城市以经济可持续的形式得到应用。

Overarching Project Goal 主要项目目标

The NSP has reduced GHG emissions of China's waste sector and induced a transformational change of the sector which increased the attractiveness of integrated waste management and waste-to-energy systems as a profitable low-carbon investment field.

NAMA支持项目减少中国垃圾处理行业温室气体排放，带来行业的转变，进而增加综合垃圾处理的吸引力，垃圾转化成能源系统成为低碳投资领域新的增长点。



Thank you for your attention!

感谢!

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