



RELIABLE BIOGAS SOLUTIONS

WORLDWIDE

BIOGAS





01

COMPANY PROFILE



Guangdong Yikang Ecological Environment Technology Group Co.,Ltd., abbreviated as "YIKANG ECOLOGICAL" is a leading provider of comprehensive solutions in the agricultural field of environmental protection. The company focuses on areas such as agricultural and livestock pollution treatment, biogas, and rural ecological environment management. We offer comprehensive solutions for the treatment and resource utilization of "solid, liquid, and gas" pollutants.

Main Business

Environmental engineering, R&D and manufacturing of environmental equipment, operation of environmental projects, production and sales of organic fertilizer.

R&D

Three core technical systems: high-concentration organic wastewater treatment, biomass energy development and utilization, and specialized environmental equipment design and development.



ASSOCIATED ENTERPRISES

Beijing YHR

Equipment Manufacturing Base

Yikangsheng Technology

Yikangsheng Equipment

Yikangsheng Service

Runtian Fertilizer

YIKANG Ecological Headquater



YHR COMPANY



YHR Environment is a wholly-owned subsidiary of YIKANG ECOLOGICAL, is a high-tech enterprise mainly engaged in research and development, production and sales of environmental protection equipment technology, and biomass energy engineering. YHR Environment has become the industry benchmark of China's Glass-Fused-to-Steel Tank, the first-class enterprise of standardization and modularization in the field of biomass biogas in China.

Equipment Manufacturing

GFS tank, biogas holder, biogas purification system, CSTR digesters, sewage treatment reactors.

Biogas EPC Service

Design, construction, installation, commissioning and training service.

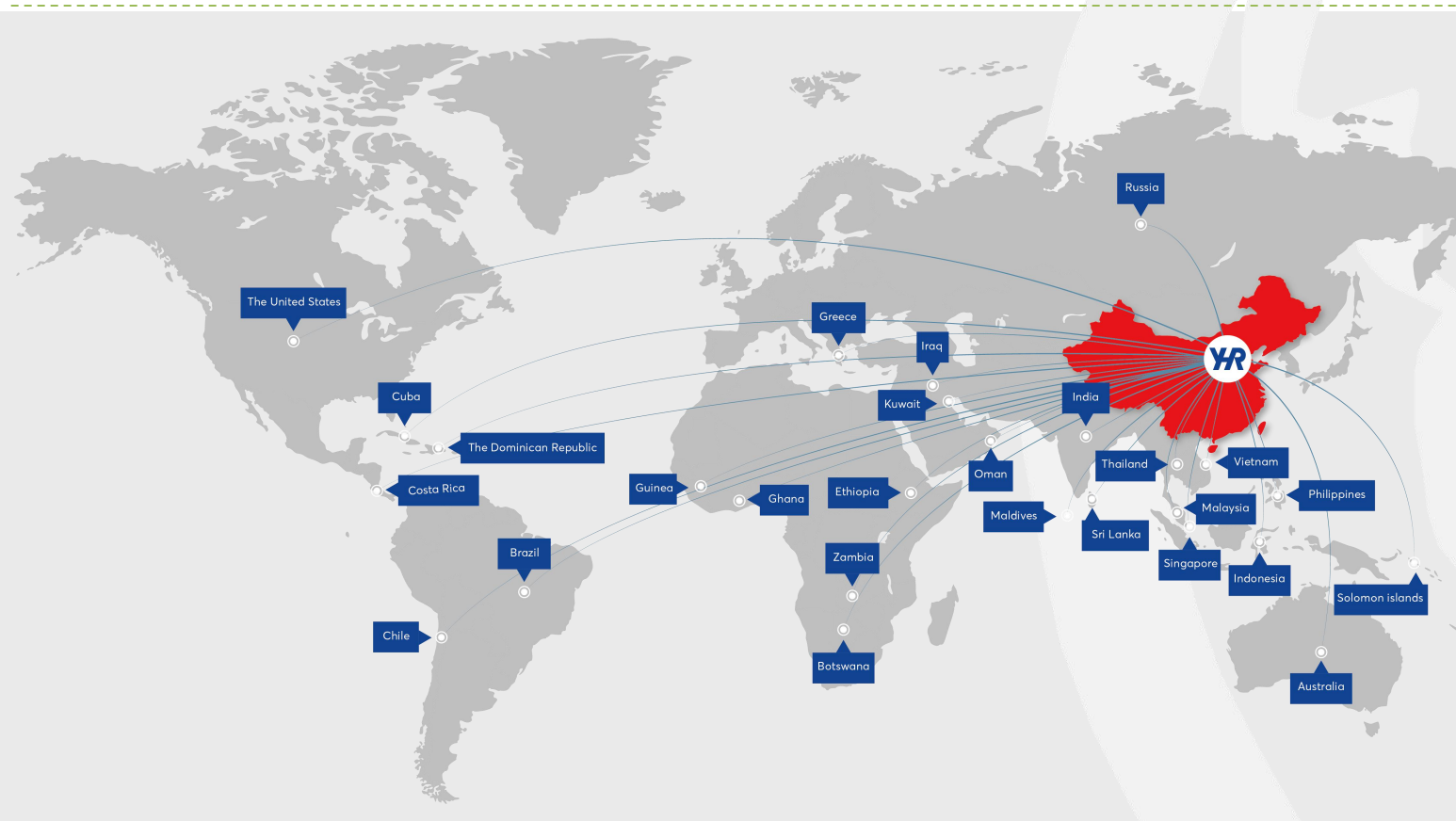
Investment & Financing

Investment in organic waste centralized treatment center, biogas or bio-CNG projects, organic fertilizer production, etc.

Operation Supervision

Operational supervision and guidance service to biogas project owners

GLOBAL MARKET



-  YHR is committed to providing integrated equipment and solutions for global clients.
-  YHR's equipment has been distributed in Southeast Asia, Australia, Middle East, Africa, Europe, North and South America, etc.



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BIOGAS SOLUTION



Feedstocks YHR handled

- Plant straw (corn, paddy, wheat);
 - Napier grass, Bagasse, POME;
 - Animal slurry and manures;
 - Kitchen and food wastes;
 - Agriculture organic wastes, sludge;
 - Dead or diseased animal body.
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STRAW SILAGE | DRY STRAW | ANIMAL MANURE

Tongliao **SPIC** Bio-CNG Project



The project involves the fermentation of a mixture of corn straw and animal manure, with biogas being upgraded to bio-CNG and solid & liquid fertilizer sales.

Location: Tongliao, Inner Mongolia

60,000 m³/d
Biogas



DRY STRAW



China Resources
Wuchang
Project
8MW 
与您携手 改变生活

The project consists of 12 CSTR digesters. It utilizes dry straw as feedstock, with a TS content of over 80%. The feedstock comprises a mixture of corn and paddy straw. The project was implemented in two phases, with a total power generation capacity of 8MW. The design substrate feeding capacity is 260 tons daily, resulting in a daily biogas production of 80,000m³/d and a daily power generation of 160,000kW·h/d.

Location: Wuchang, Heilongjiang Province



DRY STRAW

Core technology for biogas production with **Dry straw**

China Resources Yilan **4MW** Project

The project consists of 8 CSTR digesters with a volume of 5,000m³ of each. It has a daily biogas production of 40,000m³/d by feeding 130 tons of dry straw per day.

Location: Yilan, Heilongjiang Province

China Resources BinXian **4MW** Project

5 CSTR digesters with a volume of 6,000m³ of each, daily biogas production capacity is 40,000m³/d.

Location: Binxian, Heilongjiang Province



Eco-Organic Waste Resource Utilization Project

50,000 m³/d Biogas

The Juancheng Benchmark Eco-Organic Waste Utilization Project processes 350,000 tons of manure annually, producing 10.5 million m³ of green biogas and 300,000 tons of soil substrate. Covering 50,000 mu of farmland, it yields 25,000 tons of wheat and 30,000 tons of corn annually. The project boosts farmer income, achieves net-negative carbon emissions, and promotes sustainable agriculture,

establishing a model for rural revitalization and ecological protection under the "government-guided, enterprise-led" juancheng approach.



  CORN STRAW SILAGE | DRY WHEAT STRAW | ANIMAL MANURE

WANNENG Group's first large-scale biogas project in Lixin County processes 140,000 tons of manure and 20,000 tons of straw annually, producing 5.3 million cubic meters of biogas and 20,000 tons of organic fertilizer. Using advanced anaerobic digestion and purification, the biogas is fed into the urban gas network, while by-products enrich farmland. The project creates a circular "planting-breeding-treatment" model, promoting green development and rural revitalization.



18,000 m³/d Biogas



China Three Gorges Corporation **Leiyang CHP Project**

The project has the capacity to handle 370,000 tons of animal manure to generate over 26.64 million kW·h of green electricity.

Location: Leiyang, Hunan Province



40,000 m³/d
Biogas





CORN STRAW SILAGE | ANIMAL MANURE



Shizong Bio-CNG Project

The project processes 1 million tons of manure and 73,000 tons of straw annually, produces 80,000 tons of powdered organic fertilizer, 5 million m³ of bio-CNG.

5,000 m³ * 6 GFS CSTR digesters

Location: Shizong, Yunnan Province



CORN STRAW SILAGE | DRY WHEAT STRAW | ANIMAL MANURE



Tianlong Bio-CNG Project

33,000 m³/d
Biogas

3,600m³ * 9 CSTR

Semi-aerobic hydrolysis for pretreatment

Codigestion with cow manure

Location: Sanhe, Hebei province



ANIMAL MANURE | CORN STRAW SILAGE

Meikeduo

Zunhua Biogas Project

The World Bank has granted a loan for a project that involves the treatment of 268 tons per day of chicken manure, 165 tons per day of straw, and 150 tons of human feces.

Location: Zunhua, Hebei Province

45,000 m³/d
Biogas





ANIMAL MANURE | RICE STRAW



40,000 m³/d
Biogas

CPCEP Bio-CNG Project

The project is constructed by two stages. Rice straw is pretreated by semi-aerobic hydrolysis technology.

Location: Huaian, Jiangsu Province

COUNTY-WIDE MANURE CENTRALIZED TREATMENT

PROJECT FEATURES



The livestock farming is relatively decentralized within a county region, posing challenges to manure treatment and management for the local government.

The centralized treatment center provides sustainable services for regional livestock manure treatment.



The project treats mainly pig manure delivered from the pig farm around the plant. 2MW CHP + 10,000 tons annually organic fertilizer.

Location: Xinyu, Jiangxi Province



Xinyu centralized manure treatment plant



The project treats mixed animal manure from the farms nearby. 2MW CHP, 10,000 tons annually organic fertilizer.

Location: Dingnan, Jiangxi Province



Dingnan centralized manure treatment plant

BIOGAS PLANTS OF LARGE SCALE DAIRY FARMS



Liken Dairy Farm Biogas Plant



Daily biogas production **50,000**m³/d

Biogas usage: CHP

Location: Pingluo, Ningxia Province



Shouguang Farm Biogas Plant



Daily biogas production **20,000**m³/d

Biogas usage: CHP

Location: Shouguang, Shandong Province



Dairy Farm Biogas Plant



Daily biogas production **20,000**m³/d

Biogas usage: CHP

Location: Malaysia

BIOGAS PLANTS OF LARGE SCALE DAIRY FARMS



Weixian Dairy Farm Biogas Plant



Daily biogas production **24,000**m³/d

Biogas usage: CHP

Location: Weixian, Hebei Province



Daming Dairy Farm Biogas Plant



Daily biogas production **24,000**m³/d

Biogas usage: CHP

Location: Handan, Hebei Province



Jiuyuan Bio-CNG Project



Daily biogas production **30,000**m³/d

Biogas usage: Upgrade to Bio-CNG

Location: Taizhou, Jiangsu Province

MANURE TREATMENT FOR LARGE SCALE PIG FARM

Pig farm with liquid manure system has a low TS(<2%)

Anaerobic Biological Doubling Process(ABDP) and Ring in Ring(RIR) technology



ABDP technology

Capacity: 2MW CHP

Location: Guangshui, Hubei Province



ABDP technology

Capacity: 1MW

Location: Ankang, Liaoning Province



RIR technology

Capacity: 0.8MW

Location: Chifeng, Inner Mongolia



COFCO Wuhan Guangshui pig manure project



New Hope Group Liaoning pig farm project



COFCO Chifeng pig farm project

DRY & WET FERMENTATION SYSTEM

Animal manure is treated by wet CSTR system and straw substrate is treated by dry fermentation system.



Garage-type dry fermentation, daily handle animal manure 200 tons, paddy straw 85 tons, biogas production 8,000m³/d, used for CHP, annual fertilizer production 30,000 tons/year.



Shanghai Electric Group biogas project
Location: Chongming Island, Shanghai



Garage-type dry fermentation, daily handle animal manure 200 tons, corn straw 25 tons, biogas production 16,000m³/d, used for CHP, annual fertilizer production 20,000 tons/year.



CHD Group biogas project
Location: Fengning, Hebei Province

AGRICULTURAL ORGANIC WASTE



Luliang vegetable waste treatment project

2,500t/d vegetable waste leaf

20,000m³/d biogas, upgraded to Bio-CNG

Location: Luliang, Yunan Province

Guyuan potato starch waste treatment project

Agriculture process waste, potato residual

20,000m³/d biogas, CHP and process self-use

Location: Guyuan, Hebei Province



CORE TECHNOLOGY

Please contact with us for more details

ANAEROBIC BIOLOGICAL DOUBLING PROCESS



A B D P TECHNOLOGY

Suitable for low TS concentration materials.

Technical features: Higher organic loads cannot be obtained for low concentration materials, resulting in low reactor efficiency. ABDP can separate HRT, MRT, and SRT, enabling higher organic loads and improving reactor efficiency.

H I G H S O L I D ANAEROBIC PROCESS



H S A P TECHNOLOGY

Suitable for agricultural and municipal organic waste, including manure, straw, kitchen waste.

Technical features: The TS% in the fermenter is approximately 13%-14%, with a high organic load and significantly reduced digestion volume. It requires less return flow and has strong adaptability to material changes.

B I O L O G I C A L DESULFURIZATION



BDT TECHNOLOGY

More efficient and stable removal of hydrogen sulfide in biogas, patented technology.

Technical features: Two kinds of desulfurization technologies, acid-based and alkaline-based, can be flexibly chosen based on the final application of biogas.

S E M I - A E R O B I C HYDROLYSIS



SAH TECHNOLOGY

Suitable for lignocellulosic substrate like various agricultural straw.

Technical features: Microbial pretreatment rapidly degrades cellulose, hemicellulose, producing a large amount of VFA. This significantly shortens the retention time in digester and improves substrate utilization efficiency.



03

EQUIPMENT MANUFACTURING

MANUFACTURING BASE



61,000m²

Manufacturing base



80,000 pieces

GFS tank plates annually



150,000 pieces

Epoxy Coated plates annually



3 main products

GFS tanks, Epoxy coating tanks,
membrane biogas holder



Anaerobic reactors

Anaerobic reactor is the core equipment for organic solid waste treatment and high concentration organic wastewater treatment.

We customize the anaerobic reactor suitable for clients according to the different water quality characteristics.



Reactors we design and manufacture:
CSTR, UASB, IC, UBF, USR etc.

ASSEMBLED REACTOR



GFS

IC/UASB REACTOR

Suitable for high concentration organic wastewater treatment, such as landfill leachate, kitchen wastewater, pharmaceutical wastewater, printing and dyeing wastewater, paper making wastewater, beer wastewater, food processing wastewater, etc.



QUALITY

ASSEMBLED REACTOR

GFS/EPOXY COATED

CSTR REACTOR



The high inert glaze layer on the surface of the steel plate has excellent anti-corrosion performance, and can be applied to high concentration of suspended solids wastewater or waste residues, such as livestock manure, crop straw, kitchen waste, municipal sludge, wine lees, etc



MUNICIPAL WASTEWATER

STANDARDIZATION & MODULARIZATION



In the global water industry, whether it is industrial or municipal wastewater, there is an increasing trend towards equipment-based solutions. This trend is conducive to standardized design, efficient construction, and quality control of engineering projects.



Guangxi sewage project



Guangdong sewage project



Jiangsu sewage project



Fujian sewage project

Leading the Way in Biogas Technology for a Greener Future

EXCEED CUSTOMER EXPECTATIONS



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