

Project: Energetic utilisation of agricultural residues in China and Germany (ChinaRes)

[Legal framework conditions of the biogas sector in China](#)

Further information:

The following list describes the major related laws, policies and regulations for biogas development in China.

A. National and local laws and regulations

(1). *Agricultural Law of the People's Republic of China*: It is necessary to rationally develop and utilize renewable energy and clean energy, such as hydro-energy, biogas, solar energy and wind power.

(2). *Circular Economy Promotion Law of the People's Republic of China*: It encourages and supports the comprehensive utilization of crop stalks, livestock and poultry manure, by-products of agricultural products processing and waste agricultural film and the development and utilization of biogas and other biomass energy.

(3). *Energy Conservation Law of the People's Republic of China*: It encourages and supports the development of rural biogas and the promotion of renewable energy technologies such as biomass energy, solar energy and wind power.

(4). *Animal Husbandry Law of the People's Republic of China*: Livestock and poultry farms should have facilities such as biogas digesters or other harmless treatment facilities for the comprehensive utilization of livestock and poultry manure, wastewater and other solid wastes.

(5). *Pollution prevention and control regulations of scale cultivation*:

- It encourages and supports the biogas power generation of livestock and poultry dung. The electricity is mainly for self-use and the extra can be supply to the power grid.
- In accordance with national laws and regulations, power grid enterprises should provide non-discriminatory access services for biogas power generation, and purchase the surplus electricity that meets the technical standards of grid connection.
- Biogas power generation plants which use livestock and poultry wastes can enjoy preferential policies for feed-in tariffs.
- The plants which produce biogas or bio-methane with livestock and poultry wastes can

enjoy preferential policies for new energy.

B. Development planning

(1). *Outline of the 13th Five-Year Plan for National Economic and Social Development*: Speed up the development of biomass and geothermal energy, and actively develop coastal tidal energy resources. Improve the supporting policies of wind power, solar energy and biomass power generation.

(2). *Medium- and long-term development plan for renewable energy*:

- Make full use of renewable energy sources such as hydropower, biogas, solar energy and geothermal energy. Strive to make renewable energy consumption amounts to 15% of total energy consumption by 2020.
- By 2020, 10,000 biogas plants with livestock and poultry dung and 6,000 biogas plants with industrial organic waste water will be built. The biogas power generation capacity will be 3 million kilowatts.

(3). *The 13th Five-Year plan for renewable energy development*

- Accelerate the demonstration and industrialization of bio-methane. By 2020, the annual output of bio-methane is aimed to reach 8 billion cubic meters, and 160 demonstration counties of bio-methane will be built.
- Steadily develop the biomass power generation. The installed capacity of agricultural and forestry biomass direct fired power generation will reach 7 million kilowatts, and biogas power generation will reach 500 thousand kilowatts. The total installed capacity of biomass power generation will reach 15 million kilowatts and the annual power output will exceed 90 billion kwh.
- Improve the policy system to promote the development of biomass energy.

(4). *The 13th Five-Year plan for biomass energy development*

- By 2020, biomass energy will be commercialized and used on a large scale. The annual biomass energy utilization will be about 58 million tons of standard coal.
- The total installed capacity of biogas power generation will reach 500 thousand kilowatts.
- 160 biomethane demonstration counties have an annual utilization volume of 8 billion m³.
- By 2020, the biomass energy industry's investment increased by about 196 billion yuan.
- Biomass power generation investment increased by about 40 billion yuan.
- New investment in biogas of about 120 billion yuan.

(5). *The 13th Five-Year plan of National Rural Biogas*

- A total of 172 large-scale bio-natural gas projects will built. A total of 3150 large-scale biogas projects will built. Identify 1000 fruit (vegetable, tea) bog livestock cycle agricultural base. A new pattern of coordinated development of gas and fertilizer supply will be basically

formed.

- The capacity of the new pond is 22.77 million cubic meters, the capacity of biogas production is 4.9 billion cubic meters, reaching 20.7 billion cubic meters, and 26.51 million tons of biogas fertilizer are added, 11.4 million tons of chemical fertilizer are replaced by nitrogen.
- During the 13th five-year plan period, the total investment in rural biogas projects will reach 50 billion yuan.
- The large-scale biogas project will be 18.12 billion yuan, and the large-scale biogas project will be 13.361 billion yuan. Medium-sized biogas project will be 9.1 billion-yuan, small-scale biogas project will be 5.9 billion yuan, household biogas will be 3.33 billion yuan. Biogas Science and Technology Innovation Platform will be 189 million yuan.

C. Documents of national ministries

(1). Trial Measures for the Price and Cost-sharing Management of Renewable Energy Power Generation

- Scope of application: Wind power, biomass power generation (including direct combustion and gasification of agricultural and forestry waste, waste incineration and landfill gas power generation, biogas power generation), solar energy generation, ocean power generation and geothermal power generation.
- Benchmark feed-in tariff policy will be implemented for biomass power generation projects in agriculture and forestry. For the new agricultural and forestry biomass power generation projects without the investor determined through bidding, the benchmark feed-in tariff is 0.75 yuan per kWh.

(2). Action plan for organic fertilizer to replace fruit and vegetable fertilizer

- In 2017, 100 key counties (cities and districts) of fruit and vegetable tea were selected to carry out demonstration of organic fertilizer instead of chemical fertilizer. Strive for 3-5 years, initially established the organizational mode and policy system of organic fertilizer replacing chemical fertilizer, integrate and popularize the production technology mode of organic fertilizer replacing chemical fertilizer, and construct the long-term mechanism of organic fertilizer replacing chemical fertilizer for fruit and vegetable tea.
- In the main production areas of apples, citrus fruits, vegetables and quality tea, the "fruit (vegetable, tea) - Marsh - livestock" model is adopted. In the apple concentrated production area, relying on large-scale farmers and professional cooperatives, matching with large-scale cultivation, large-scale biogas facilities were established and biogas slurry was applied to orchards to reduce the amount of chemical fertilizer.

(3). Opinions of the general office of the state council on accelerating the resource utilization of livestock and poultry breeding wastes (Guo Ban Fa [2017] No. 48), Notice of the General Office of the Ministry of Agriculture of the General Office of the National Development and

Reform Commission on Promoting the Utilization of Livestock and Poultry Manure Resources in the Whole County (Development and Reform Office of Agricultural Economics [2017] No. 1352)

- Clearly proposed to implement the biogas power grid benchmarking price and online electricity full guarantee acquisition policy. Bio-natural gas meets the technical standards for urban pipe network access, and enterprises that operate urban gas pipe networks should receive their access to the network.
- From 2018 to 2020, more than 200 livestock counties will be selected to carry out the construction of livestock and poultry manure treatment and resource utilization facilities. Focusing on the anaerobic fermentation mode of large-scale farm waste treatment and biogas utilization, support specialized enterprises and large-scale farms to build anaerobic digestion units with a total volume of more than 500 cubic meters of large-scale biogas projects, taking into account clean energy and organic fertilizer production. Realize the full use of "Three Marsh".

D. More than ten provinces and regions, such as Hebei, Gansu, Anhui, Guangxi and Zhejiang etc. have promulgated local laws and regulations:

- (1). *Hebei Provincial on Management Regulation of New Energy Development and Utilization*
- (2). *Gansu Provincial Construction and Management Regulation of Rural Energy*
- (3). *Anhui Provincial Construction and Management Regulation of Rural Energy*
- (4). *Guangxi Zhuang Autonomous Regional Construction and Management Regulation of Rural Energy*
- (5). *Zhejiang Provincial Promotion Method of Biogas Development and Utilization*
- (6). *Hunan Provincial Regulation of Rural Renewable Energy*
- (7). *Shandong Provincial Regulation of Rural Renewable Energy*
- (8). *Heilongjiang Provincial Development and Utilization Regulation of Rural renewable Energy*
- (9). *Hubei Provincial Development and Utilization Regulation of Rural Renewable Energy*