

Present Situation and Development Trend of Bioenergy in China

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OUTLINE

Background

Status

Situation & Policy

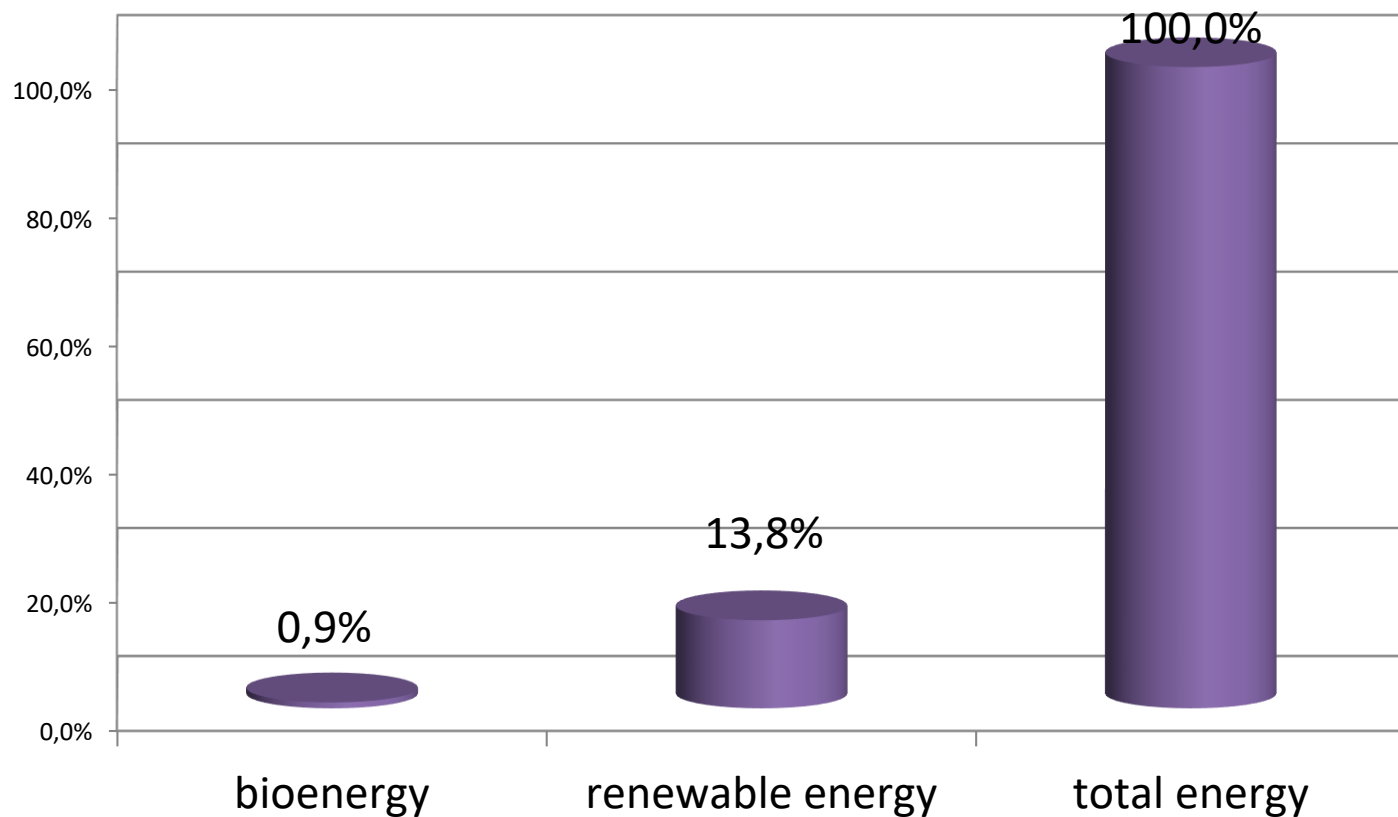
Prospects & Opportunities

Conclusion

I. Background



Bioenergy Share of China Final Energy Consumption 2017



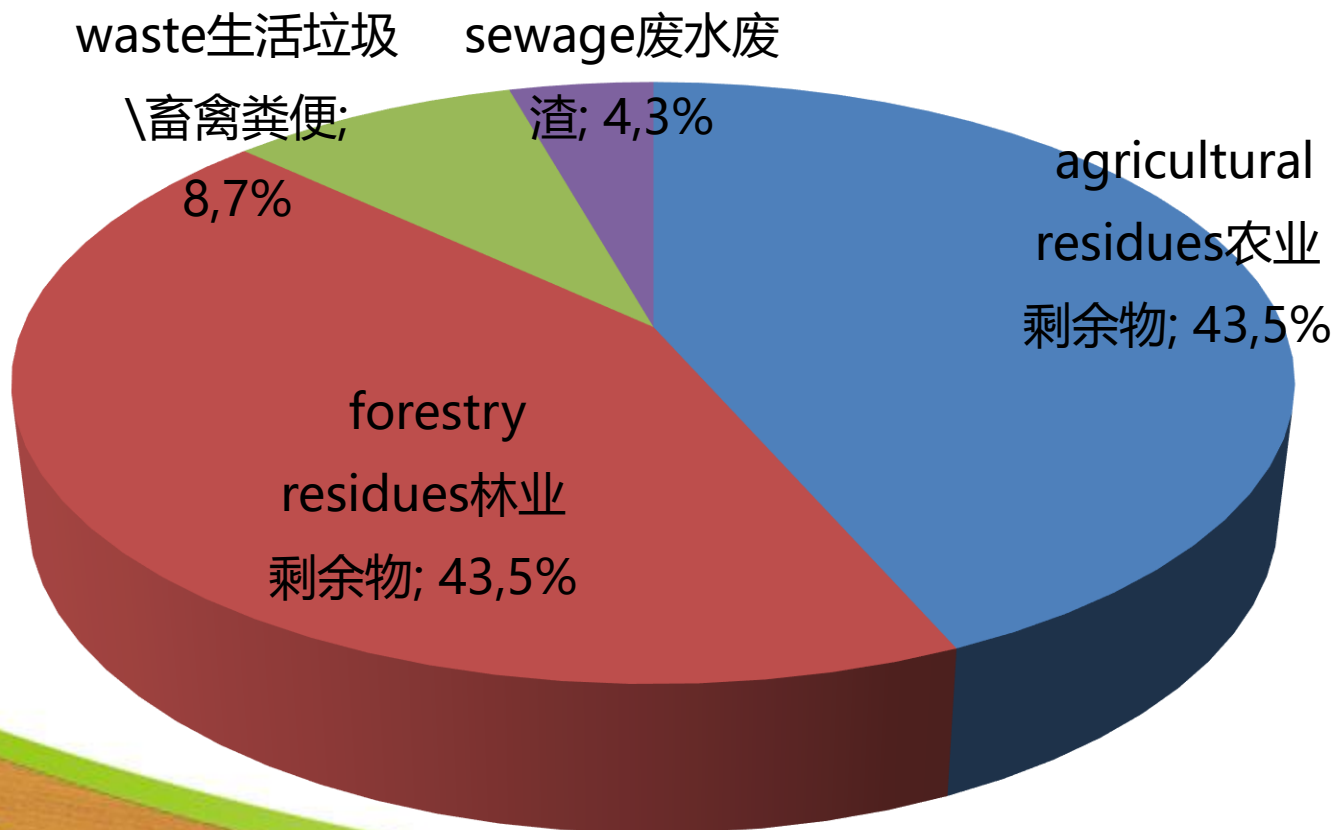
II. Current status of bioenergy

- Bioenergy utilization about 41 million tce, about 6.6% of renewable energy, about 1% of total energy consumption in 2017.

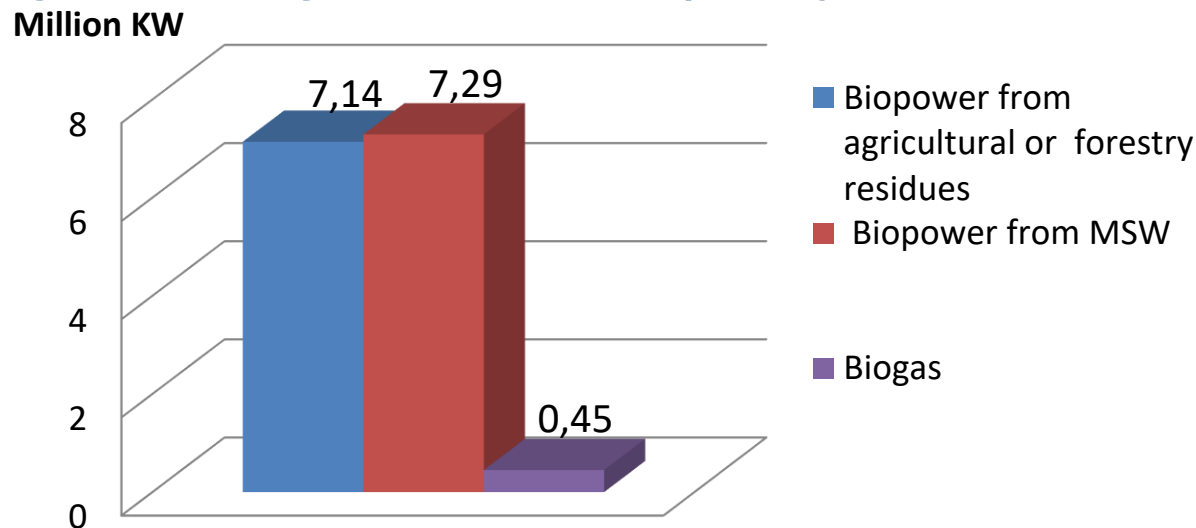


• Biomass Resources Potential

- Total biomass: 460 million tce
- Used biomass: 41 million tce



- Biopower generating installed capacity 14.9GW



Pellets

Pellets production 10 million ton

Biogas

Biogas production 17 billion cubic meter

Biofuel

Bioethanol: 2.6 million ton;

Biodiesel: 0.6 million ton

Compare the status quo with the goals of the 13th FYP



Target of Bioenergy in 2020

Area	Target scale		Utilization scale		TCE
	Qty	Unit	Qty	Unit	(10,000 tons/year)
1、 Biomass Power	15	GW	14.88	GW	2660
2、 Bio-natural gas	8	Billion m ³	64	Million m ³	960
3、 Pellet	30	Million tons	10	Million tons	1500
4、 Biofuels	6	Million tons	3.2	Million tons	680
Fuel ethanol	4	Million tons	2.6	Million tons	380
Biodiesel	2	Million tons	0.6	Million tons	300
Total					5800

Brief summary

Bioenergy industry development is lopsided

Biomass power generation has begun to take shape;

Pellet industry still needs standardized management;

Biogas industry mainly consists of rural households and small and medium-sized biogas plant;

Fuel ethanol raw materials mainly from corn, biodiesel raw materials mainly from waste oil, advanced biofuels also need to be commercialized.

III. Situation & Policy

规划修编 Planning adjustment

热电联产 Promotion of CHP

清洁供热 Strengthen clean biomass heating

补贴政策 Subsidy for biomethane

交通燃料 Promotion of fuel ethanol

1、Strategic planning



生物质能发展“十三五”规划
13th Five-Year Plan for Bioenergy Development

可再生能源发展“十三五”规划实施的指导意见
The implementation guidance of 13th Five-Year
Plan for RE development

关于开展生物质发电“十三五”规划布局修订工作的通知
Layout revision of the 13th Five-Year
Plan for Bioenergy Development

《中共中央国务院关于实施乡村振兴战略的意见》
The strategy of rural vitalization

2、Heating policies

<关于印发北方地区冬季清洁取暖规划（2017-2021年）的通知
>发改能源〔2017〕2100号

North of China Winter Clean Heating Planning

《关于北方地区清洁供暖价格政策的意见》 The Opinion of
Clean Heating Price Policy in the North of China

《促进生物质能供热发展指导意见的通知》发改能源
[2017]2123号

To promote the guidance of biomass heating development

<关于开展“百个城镇”生物质热电联产县域清洁供热示范项
目建设的通知>国能发新能〔2018〕8号

100 countries biomass CHP programme

3、Green gas



《促进生物天然气产业化发展的指导意见》 The guidance of promoting the development of biological natural gas industrialization

《全国农村沼气发展“十三五”规划》 National rural biogas development 13th FYP

《关于加快推进畜禽养殖废弃物资源化利用的意见》（国办发[2017]48号） Accelerating the utilization of animal waste

《畜禽粪污资源化利用行动方案（2017-2020年）》 Action plan for the utilization of livestock and poultry manure resources

《农村沼气工程转型升级工作方案》 Work plan of transformation and upgrading of rural biogas project

11th to 12th Five-
Year
Plan(2006-
2015)

“13thFive-Year
Plan(2016-
2020)

- Starting fuel ethanol use

- Implement the non-grain ethanol strategy

- 《 expansion of the production and utilisation of bio-fuel ethanol nationwide 》

IV. Opportunities & challenges

非电 Non-
Electricity

供 热
Heating

生物天然气
Green Gas

生物燃料
Biofuel

challenges



尚未形成共识 Lack of consensus

- Insufficient understanding of biomass heating

产业链上下游受限 Imperfect industrial chain

- Difficult to collect raw materials; Urgent need to innovate logistics mode

标准体系不健全 Immature standard system

- Bio-nature gas、pellets, Lack of testing and certification standards

政策保障体系有待加强 Strengthen policy support

V. Conclusion

The government's attitude is very clear to support the bioenergy industry.

Bioenergy development potential will be in the rural areas .

The development of Bioenergy industry has a promising prospect in the non-electric field.

Thank you !

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