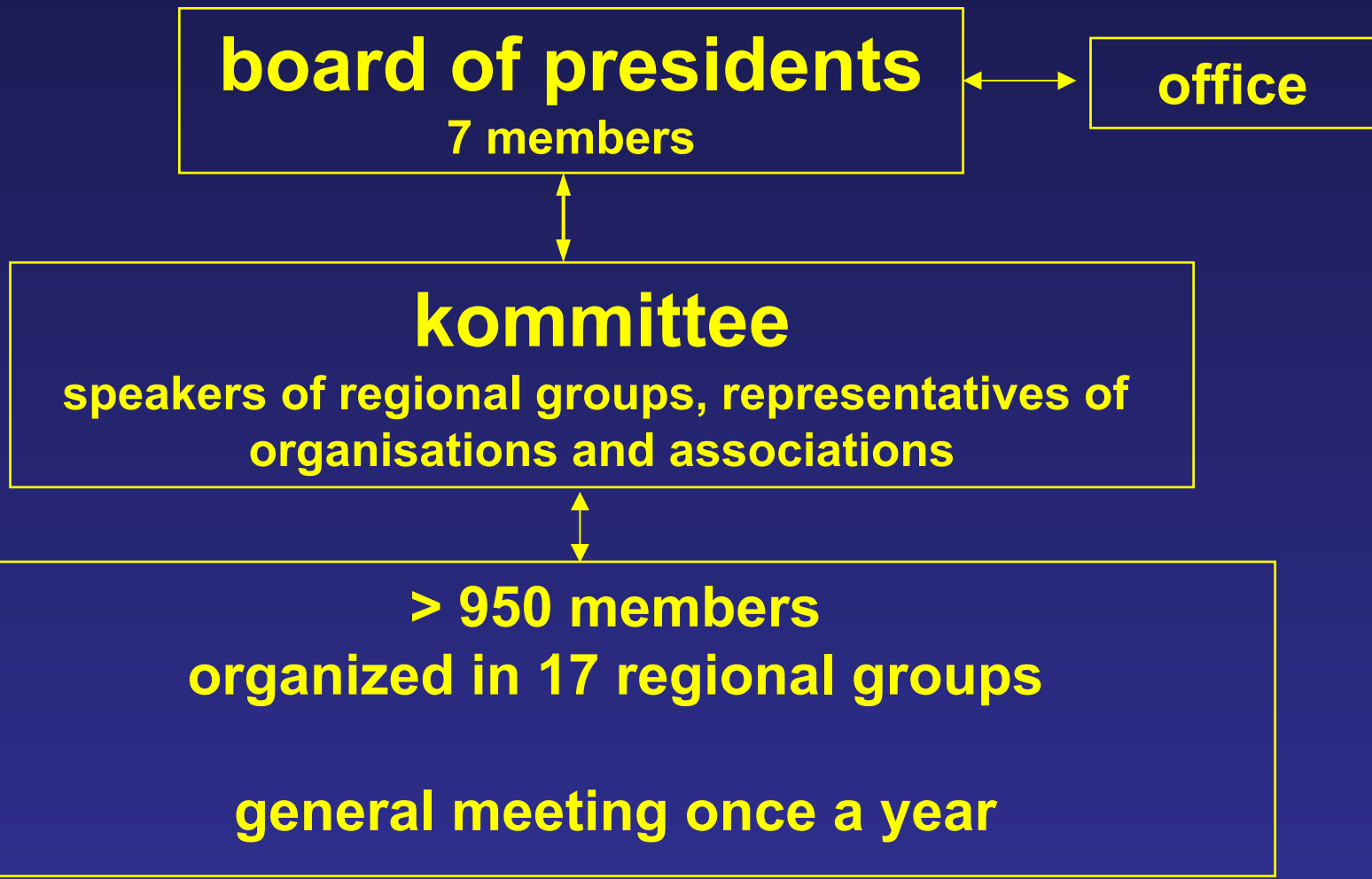
Biogas in Germany – Actual Situation and Prospects

Structure

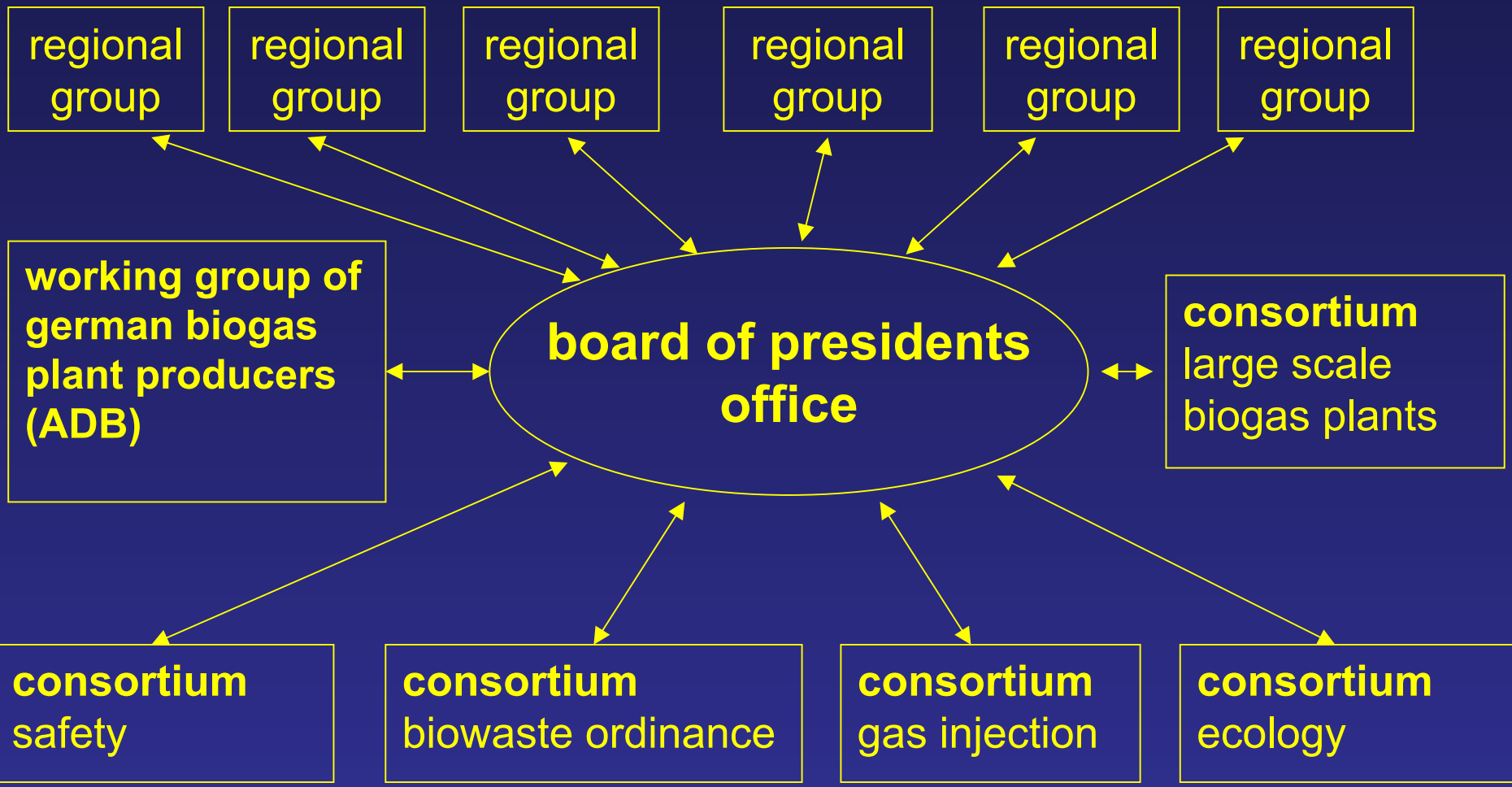
- **German Biogas Association**
- **Actual Situation of the Biogas Sector**
- **What do we need in future?**

Structure of the German Biogas Association



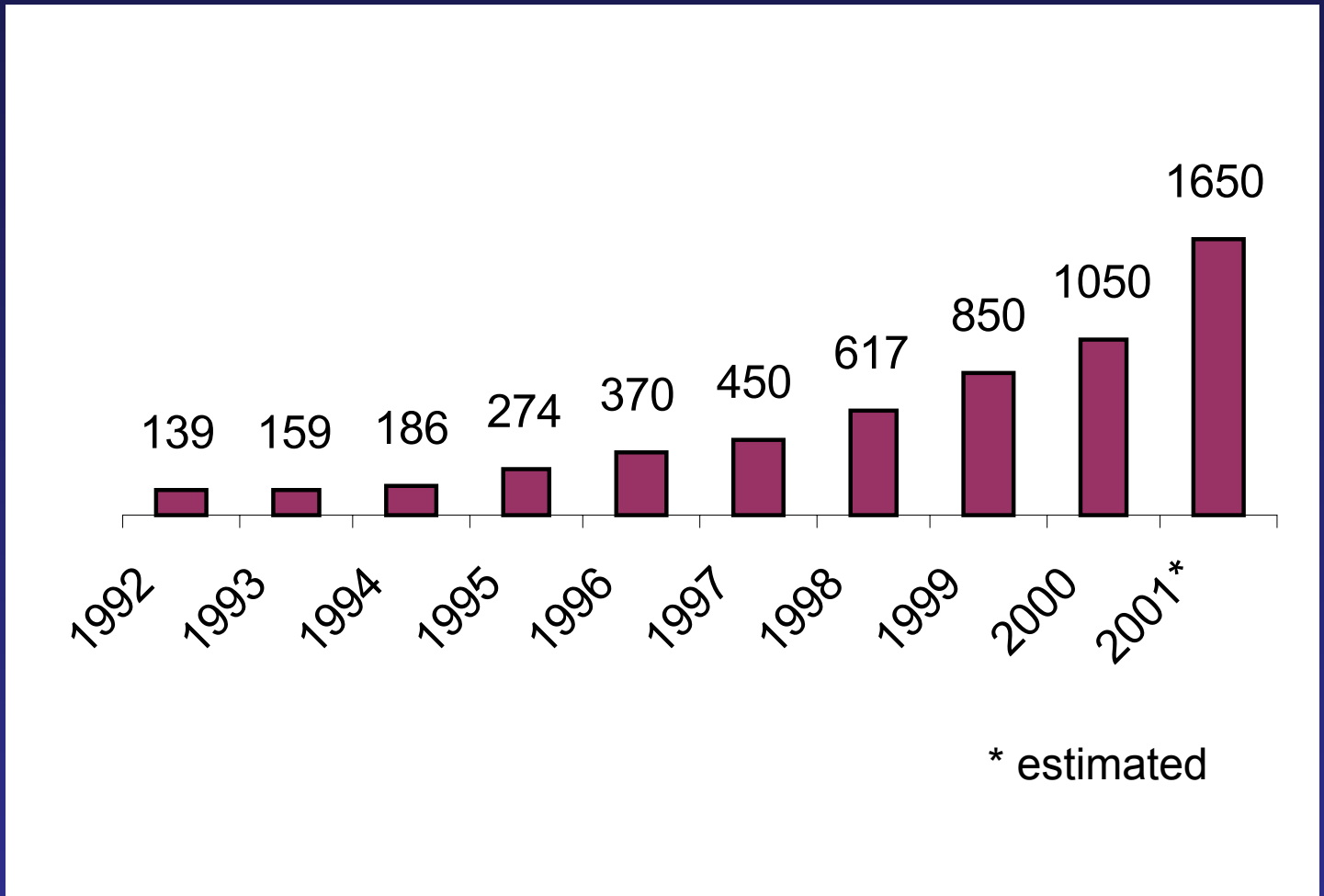
German Biogas Association

Working Structure



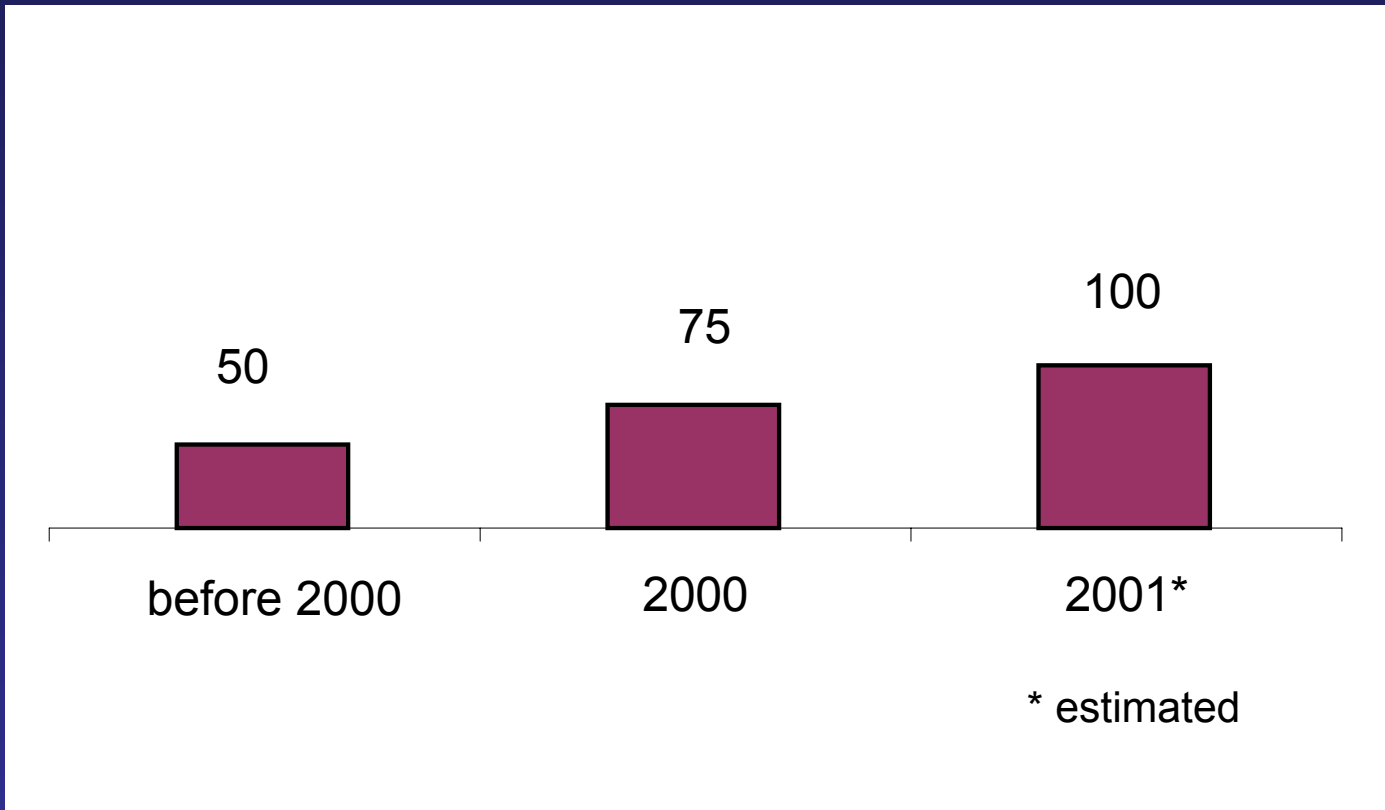
German Biogas Association

Biogas Plants in Germany



German Biogas Association

Average installed electric power (kW) of new plants



German Biogas Association

Installed electric power (MW)

* estimated

German Biogas Association

Locations of Biogas Sites in Germany

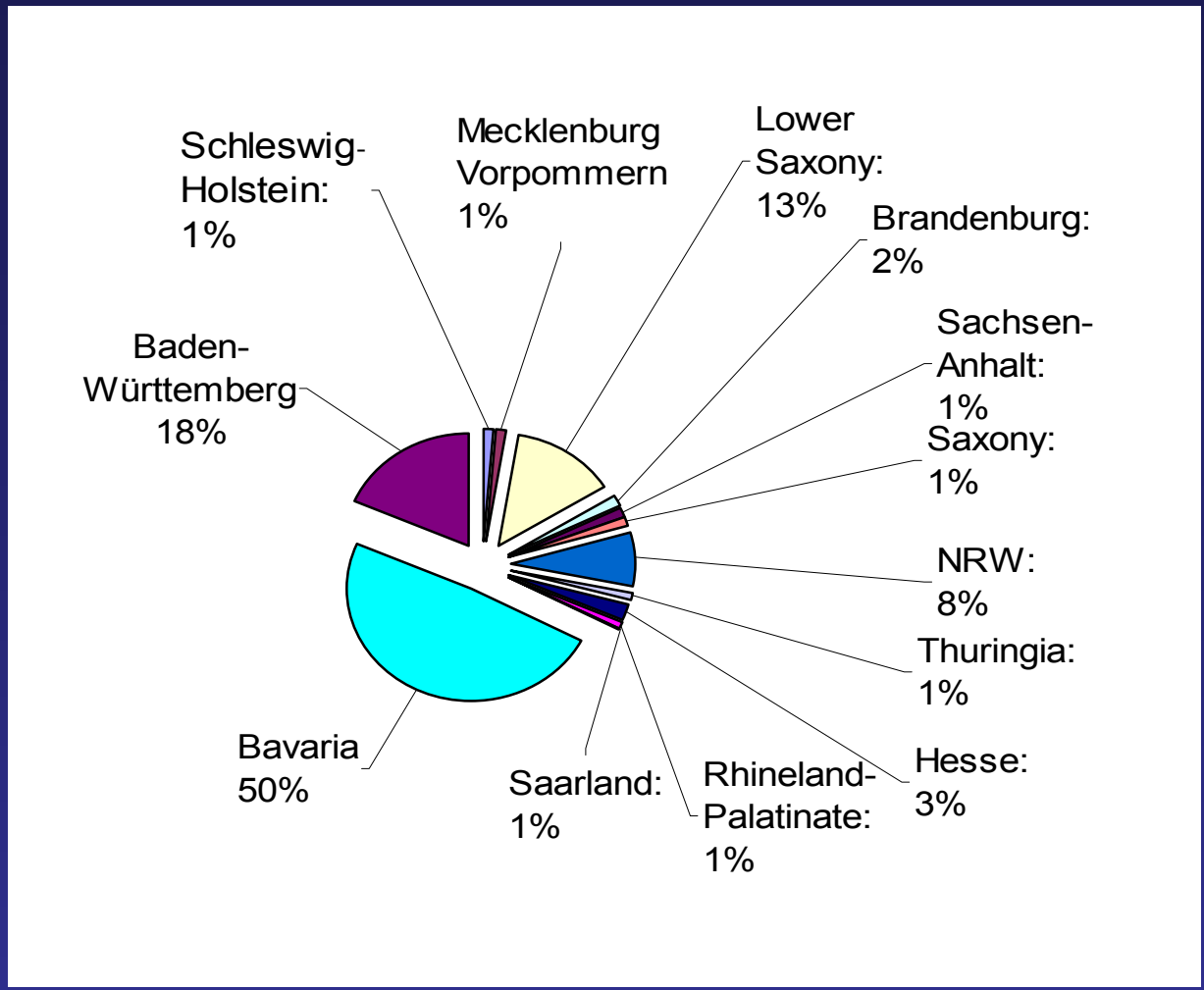
Legende

Biogasanlagen in Deutschland
Stand: 28.02.2001 nach
"Neue Energie" , Heft 4 2001

Kapazität	erbaut seit 1.1.2000	erbaut bis 31.12.1999
< 70 kW		
70 - 499 kW		
500 kW		

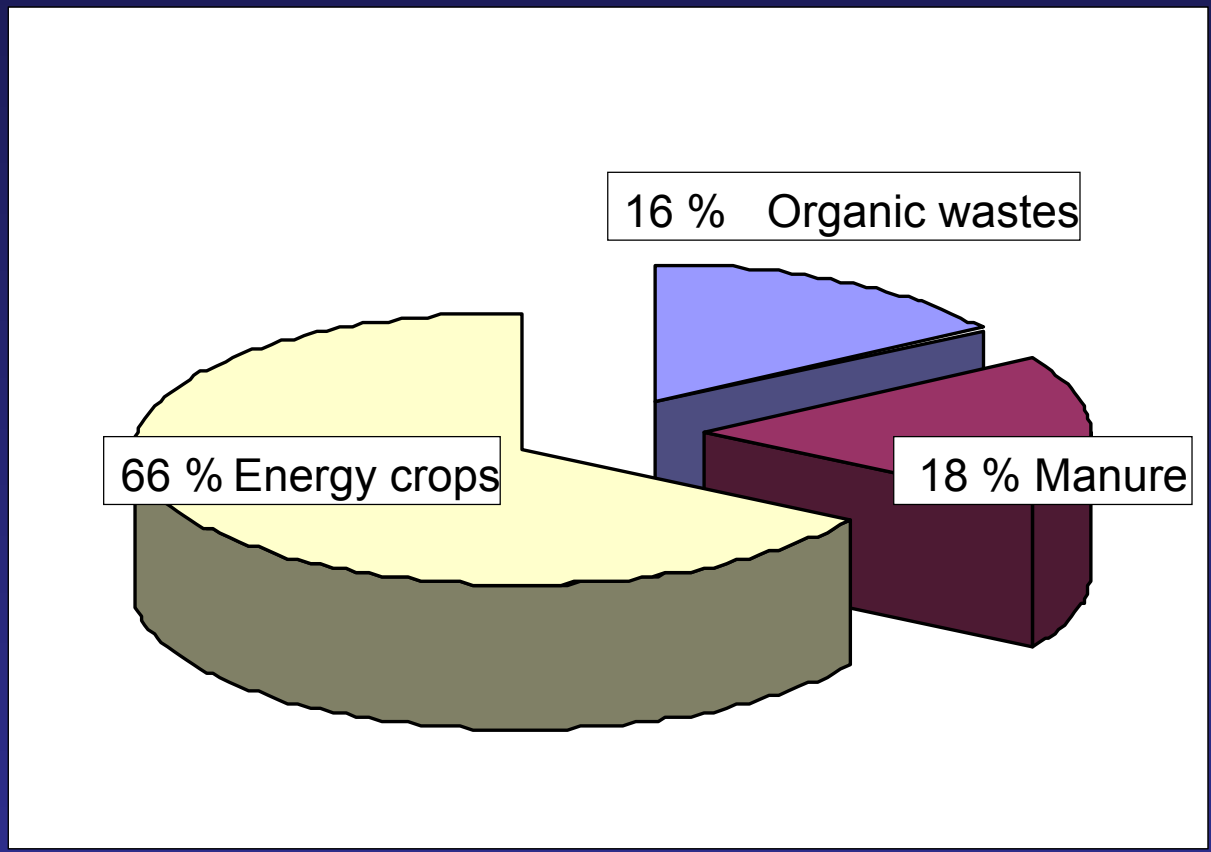
German Biogas Association

Distribution of the Biogas Plants in the German States



German Biogas Association

Utilisable production potential



German Biogas Association

The Renewable-Energy-Act

- **Target:**
  "The purpose of this Act is to facilitate a **sustainable development of energy supply** in the interest of managing global warming and protecting the environment and to achieve a substantial increase in the percentage contribution made by renewable energy sources to power supply in order at least to **double the share of renewable energy sources in total energy consumption by the year 2010, in** keeping with the objectives defined by the European Union and by the Federal Republic of Germany."

Compensation according to the Renewable Energy law (EEG)

Electricity from		Compensation in € cent/kWh Year taken into operation 2000	2001	2002	2003
Solar energy		50.6	50.6	48.1	45.7
biomass (solid, liquid, gaseous)	<u>installed power</u> • ≤ 500 kW • 501 kW – 5 MW • 5 MW – 20 MW	 10.2 9.2 8.5	 10.2 9.2 8.5	 10.1 9.1 8,4	 10.0 9.0 8.4
wind power	<u>runtime (years)</u> • 1 – 5 (also longer depending on the location) • 6 – 20	 9.1 6.2	 9.1 6.2	 8.9 6.1	 8.8 6.0
water power, landfill gas, gas from wast water treatment	<u>installed power</u> • ≤ 500 kW • > 500 kW	 7.7 6.6	 7.7 6.6	 7.7 6.6	 7.7 6.6
geothermal energy	<u>installed power</u> • ≤ 20 MW • > 20 MW	 8.9 7.2	 8.9 7.2	 8.9 7.2	 8.9 7.2
The Year of commissioning determines the compensation over the entire runtime. The runtime is 20 years. Water power unlimited.					

German Biogas Association

Idea of Renewable Energy Act

- Fixed compensation
- All consumers share the costs of renewable energies

Obstacles of Renewable Energy Act

- Problems with national energy supply companies
- Charges for the technical instalment
- Definition of the connection point
- Definition of biomass
  → Biomass Ordinance,
  double fuel engines
- Compensation too low

Legislative Obstacles: Biowaste Ordinance

Regulating:

- kind of bio waste which can be used
- treatments of bio waste before used
- examinations of end products
- verification of heavy metals in the soil
- direct and indirect process investigations of AD system

Legislative Obstacles: Fertilizer Ordinance

- regulates the use of all fertilizers
- Problem: end product of anaerobic digesters can be used legally only on fields belonging to the biogas site

Renewable Gas Act

- Should regulate the injection and compensation of Biogas into the gas grid
- Under discussion

Summary

- The Renewable Energy Act (EEG) gave a strong impulse to the development of AD in Germany
- Problems with legislative regulations because we are still a „new buisiness“
- Energy providing companies try to slow down the positive development within the biogas sector
- Powerful representations of interests is needed on national and international level

German Biogas Association
www.biogas.org