


German Biogas Association  
Association Allemande du Biogaz  
Asociación Alemana de Biogás


**Fachverband  
Biogas e.V.**




## The struggle to establish BIOGAS in Germany

**Harm Grobrügge**  
Fachverband Biogas e. V.  
European Biogas Association EBA

## The Beginnings




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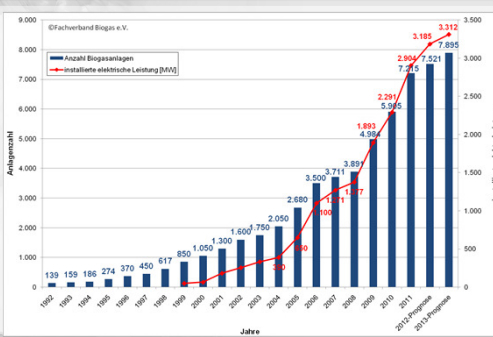
## The Beginnings

- Pre-/post-war situation: Few plants, mostly sewage treatment, gas used in vehicles ; 2 agricultural plants known, gas in tractors and heating, input: manure
- Energy crises of the 70s: 30 – 40 agricultural plants, heating, (CHP)
- 1990 feed-in-legislation: guaranteed grid-access, low tariff for biogas-electricity; CHP, electricity primarily for own use, alternative inputs, landfill-gas
- 2000 feed-in-act: higher tariffs, CHP, growing competition for inputs
- 2004 revision of feed-in-act: differentiated tariffs for waste and (higher ones) for energy crops

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## Number of biogas plants and installed capacity



Jahre	Anzahl Biogasanlagen	Installierte elektrische Leistung [MW]
1990	139	0
1991	159	0
1992	186	0
1993	274	0
1994	370	0
1995	450	0
1996	517	0
1997	650	0
1998	800	0
1999	1,050	0
2000	1,300	0
2001	1,600	0
2002	1,750	0
2003	2,050	0
2004	2,680	100
2005	3,500	100
2006	3,714	1,147
2007	3,851	1,880
2008	4,958	2,291
2009	5,295	2,994
2010	7,215	3,185
2011	7,521	3,312

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## Biogas sector statistics at a glance

	End 2010	2011	Forecast 2012	Forecast 2013
Number of plants (thereof feeding biomethane)	5,905 (45)	7,215 (80)	7,521 (100)	7,895 (120)
Installed electric capacity (MW)	2,291	2,904	3,185	3,312
Additional installed electr. Capacity – new plants – re-powering	398 MW	613 MW	110 MW 170 MW	126 MW 177 MW
Net electricity production in TWh/a	14.82	18.40	21.57	22.43
Supplied Households (in millions)	4.2	5.3	6.2	6.4
Share in electricity consumption in %	2.46%	3.03%	-	-
Turnover (Billion-€)	5.1	6.9	6.7	7.2
Jobs	39,128	54,005	48,565	51,863
Export quota in %	10%	10%	30%	36%

Sebastian Stöpp  
12.06.2012

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## Problems we had to deal with



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## Problems we had to deal with

- CHP: no engines – not enough good projects for waste heat usage
- Grid operators: unwillingness, unnecessary hurdles
- Technical development: no help from science
- Authorities: no expertise – later growing demands (industry standard)
- Public: prejudices against and fear of the dangers of biogas
- Farmers: fear of competition, “maize problem”
- Feed-in-tariffs get more complicated with each revision of the EEG (2000/2004/2009/2012)

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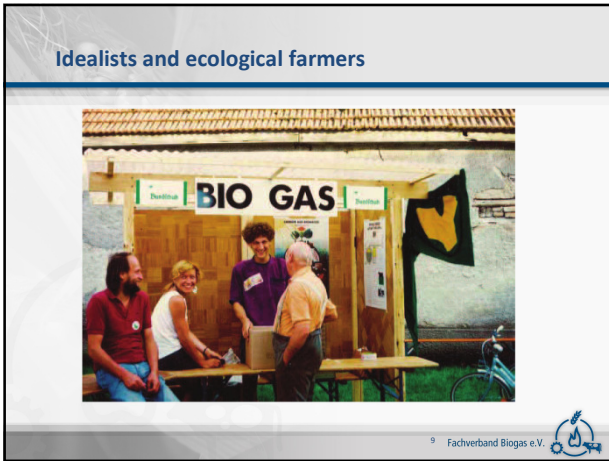


## Idealists and ecological farmers

- 80s/90s - Improvement of fertilizer quality
- Biogas study-tours in southern Germany
- Biogas pioneers openly discussed their mishaps
- Learning by doing, but from each other
- The feeding of a biogas plant has to be planned
- Annual biogas conferences, started in 1991
  - Experts and farmers exchanged their knowledge and experiences
  - Lead to founding of the “Fachverband Biogas” in 1992

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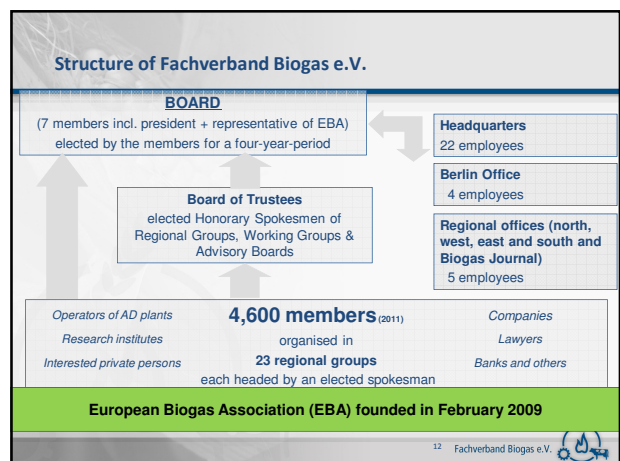
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Very soon it became obvious that we had to try and speak up politically, not only as far as the EEG was concerned, but also in aspect of many other legislations concerning biogas:

- water treatment, fertilizer regulation, building permits, waste directives, questions of hygiene, grid connection for electricity as well as gas grids, gas quality regulation, vehicle fuel regulation, safety etc.


The Fachverband Biogas succeeded in becoming the voice of biogas in Germany. We joined forces with the other renewables in the BEE(Federal Association of Renewable Energy), and in 2009 initiated the founding of EBA, by the means of which we hope to establish a strong biogas representation in Brussels.

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### European Biogas Association

24 countries - 27 National Organisations - 27 companies



[www.european-biogas.eu](http://www.european-biogas.eu)

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## Thank you for your attention!

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### European Biogas Association

<ul style="list-style-type: none"> <li>- Austria</li> <li>- Belgium</li> <li>- Czech Republic</li> <li>- Estonia</li> <li>- Finland</li> <li>- France</li> <li>- France</li> <li>- France</li> <li>- Germany</li> <li>- Germany</li> <li>- Greece</li> <li>- Great Britain</li> <li>- Great Britain</li> <li>- Hungary</li> <li>- Ireland</li> <li>- Italy</li> <li>- Latvia</li> <li>- Lithuania</li> <li>- Luxembourg</li> <li>- Poland</li> <li>- Poland</li> <li>- Romania</li> <li>- Slovakia</li> <li>- Spain</li> <li>- Sweden</li> </ul>	<ul style="list-style-type: none"> <li>(ARCOE, Kompost &amp; Biogas)</li> <li>(ValBiom - Wallonian Biogas Association)</li> <li>(Česká bioplynová asociace)</li> <li>(Eesti Biogaasid Assotsiatsioon MITÜ)</li> <li>(Suomen Biokaasuyhdistys)</li> <li>(AITEE Club Biogaz and Méthéor)</li> <li>(Association Energie Développement Environnement)</li> <li>(Association pour la Méthanisation Écologique des déchets)</li> <li>(Fachverband Biogas and FNBB)</li> <li>(Fördergesellschaft für nachhaltige Biogas- und Bioenergienutzung e.V.)</li> <li>(Hellenic Biogas Association)</li> <li>(The Anaerobic Digestion and Biogas Association Ltd.)</li> <li>(REA - Biogas Group)</li> <li>(Magyar Biogáz Egyesület)</li> <li>(Irish Biomass Association IrBEA)</li> <li>(Conorzio Italiano Biogas)</li> <li>(Latvijas Biogāzes Asociācija)</li> <li>(Biodujų Asociacija)</li> <li>(Biogasvereniging)</li> <li>(Polskie Stowarzyszenie Biogazu)</li> <li>(Polish Economic Chamber of Renewable Energy)</li> <li>(Asociația Română Pentru Biogaz)</li> <li>(Asociácia výrobcov energie z obnoviteľných zdrojov AVEOZ)</li> <li>(Asociación Española de Biogás AEBIG)</li> <li>(Energigas Sverige)</li> </ul>
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