
Market Development of Biogas Feed-In in Germany

Potentials, Projects, Chances and Constraints

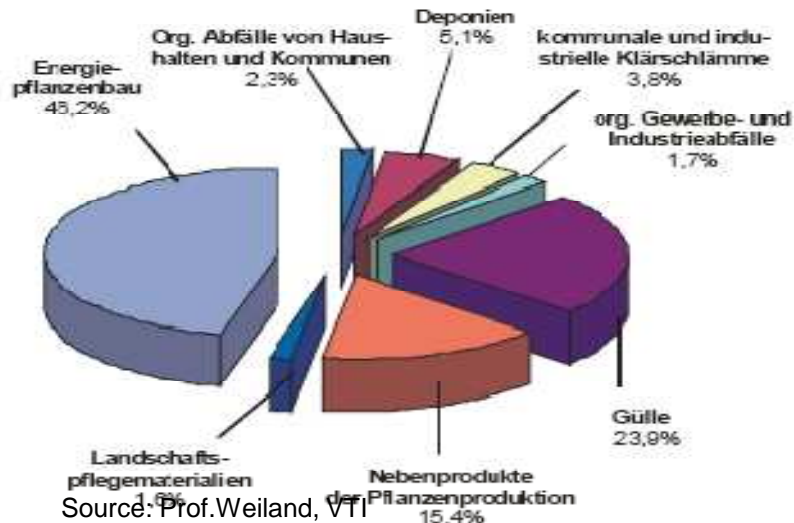


Structure

- Potentials of the German biogas feed-in
- Overview of biogas feed-in in Germany
- Chances and constraints of the German biogas market
- Problems

Bio Gas Potential in Germany

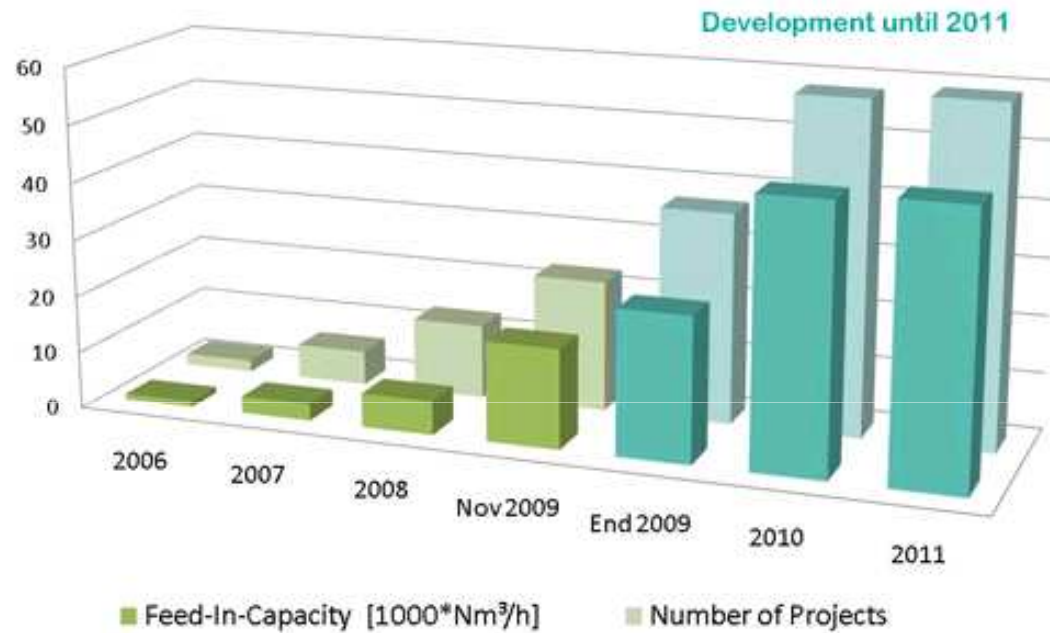
24 bn m³ Biogas/a (12.6bn m³ methane/a)
14% of natural gas consumption
25% of fuel consumption



Target Germany: 10 bn m³/a in 2030

- Significant biogas potential (over estimated?)
- Sustainable production of biomass is compulsory
- Multi usable
- Not sufficient for any type of target energy!
- Searching for most efficient ways to use biogas
- Taking advance of specific properties of biogas

Overview of biogas feed-in in Germany



German Energy-Agency

- Main market in Germany: CHP-electricity (EEG)

- Major market in other countries: fuel

Reasons:

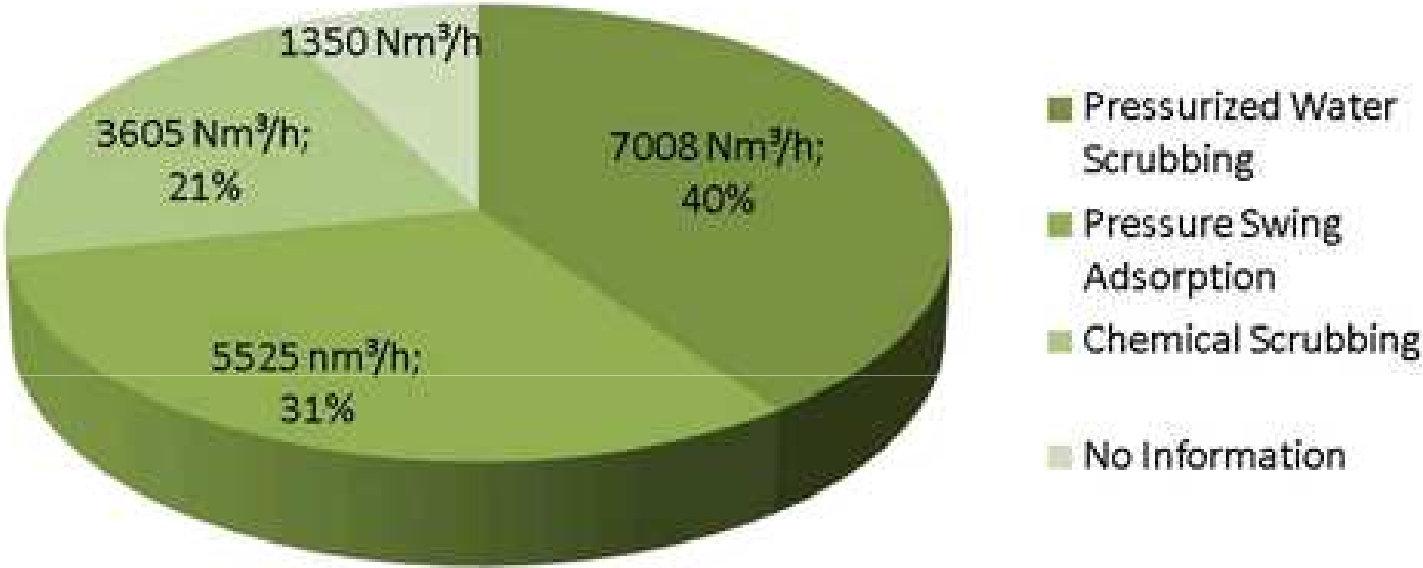
- Availability of the grid

- Grid access

- Lack of standards

- Good experiences with EEG

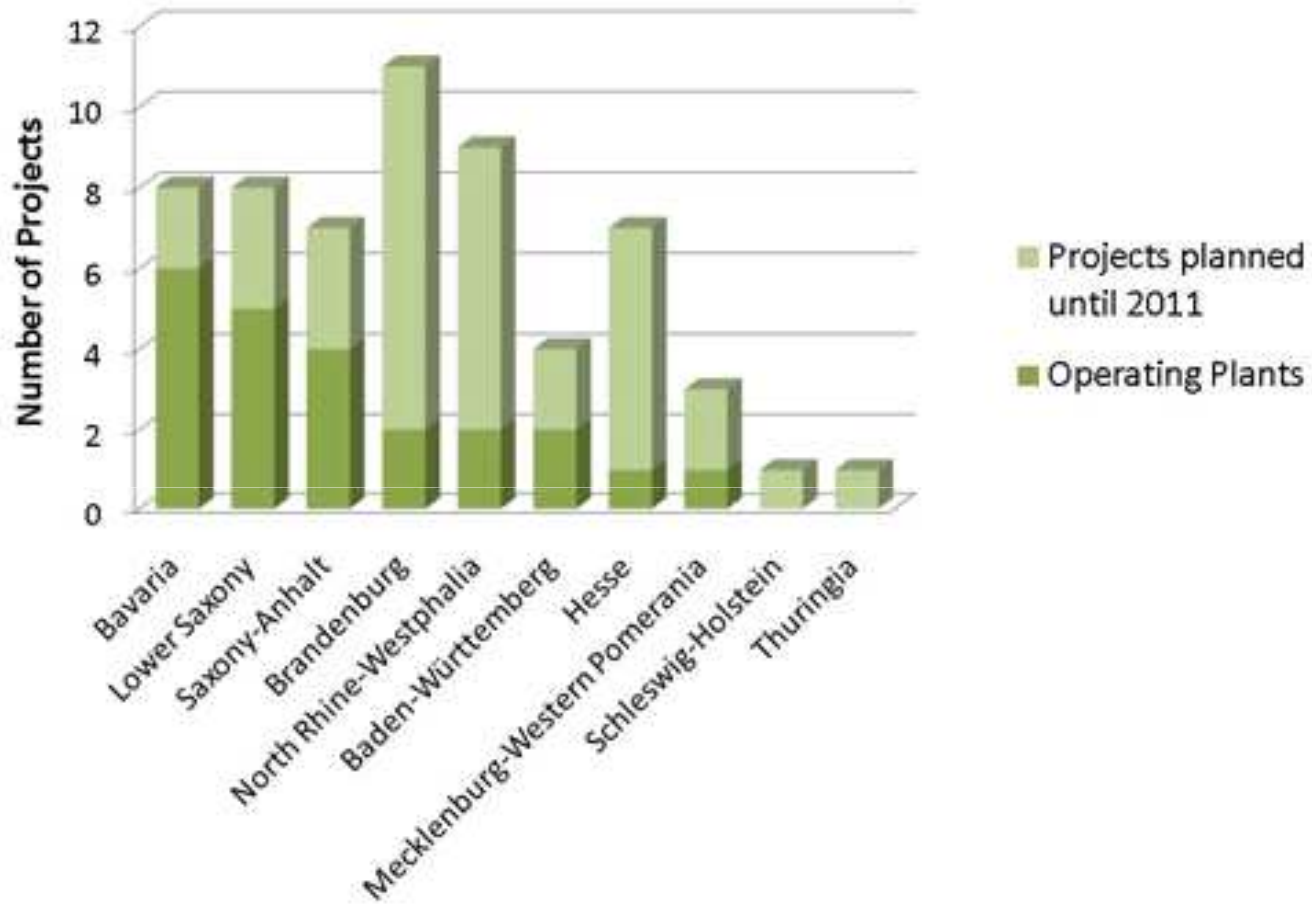
Projects / Technology



German Energy Agency

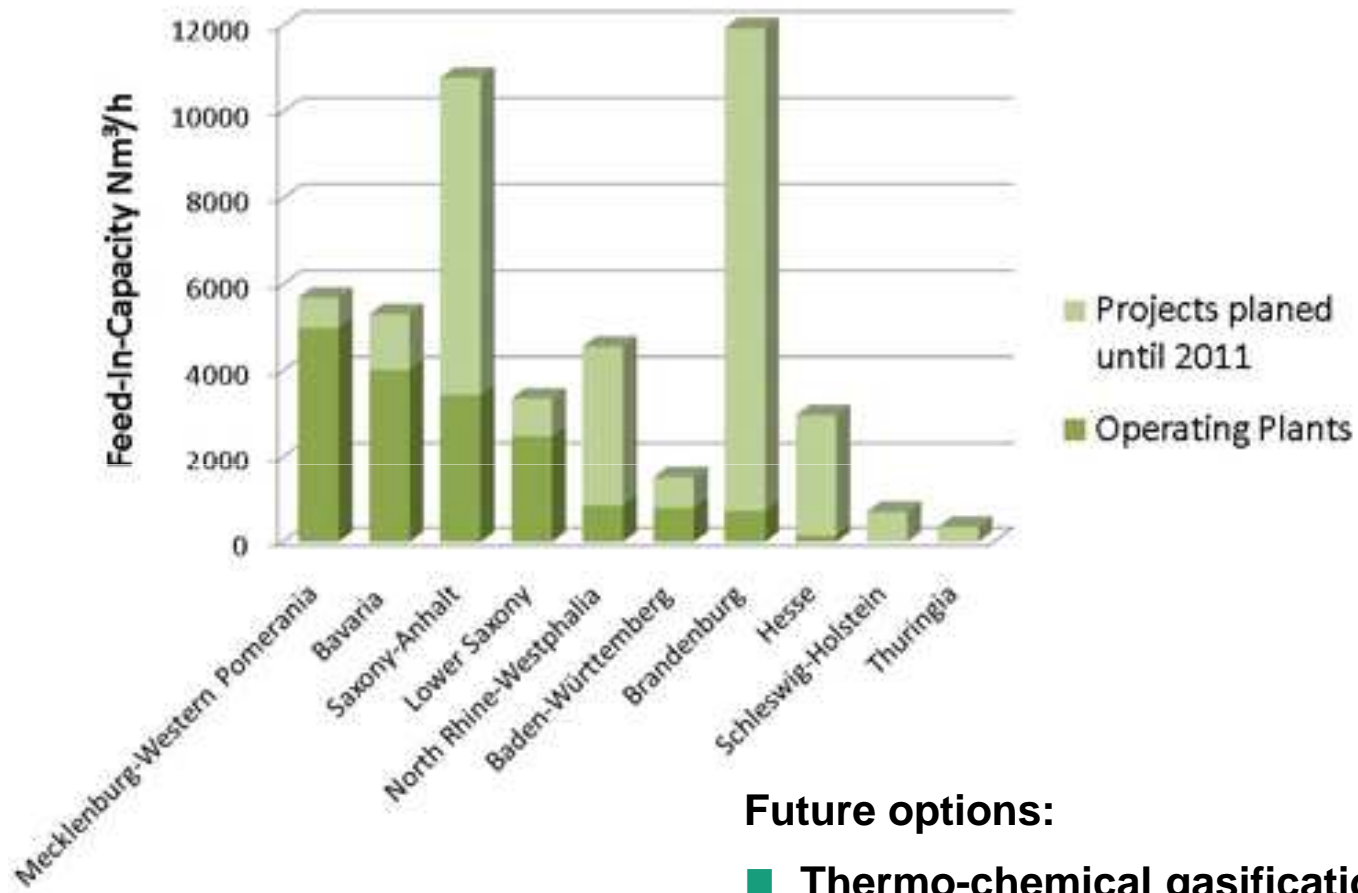
Methane slip 0.5%

Projects / Number



German Energy-Agency

Projects / Feed-In-Capacity



German Energy-Agency

Future options:

- Thermo-chemical gasification
- Wind to SNG via reversal reformation

Problems in Germany

- Chances to reach the target?
- Market price for natural gas
- Substitution of CHP systems on natural gas basis (no new ones)
- Biogas does not solve the CHP core problem of using heat
- Complicated EEG (el. feed in act) conform documentation: Biogasregister
- Excellent control mechanism via EEG
- Bio methane in the heat sector: substitution of natural gas (and other RE!)
- Potential of GHG-reduction should be used!!!
- Unbundling of energy market vs. gas feed-in act
- ...

But

Methane chain is indispensable for today and future energy supply

Conclusions

- Biogas feed-in has a high potential in Germany and offers a wide range of applications
- Considerable projects in operation
- Many projects in status of planning
- Target is very ambitious
- Today difficult market situation
- Difficult decision: EEG and/or gas feed-in act
- Biogas feed-in is a key element for a future energy supply and allows transition from today to tomorrow

GO ON!

Thank you for your attention.



advancing energy systems