

BIOGAS ITALY 2019



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German Biogas Association
Association Allemande du Biogaz
Asociación Alemana de Biogás
www.biogas.org

Biogas: The German model and programmability

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Fachverband Biogas e.V., German Biogas Association

**Biogas
can do it!**

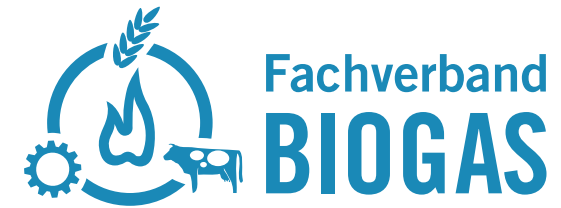


Content



- German Biogas Association
- The German Model: Biogas in the context of the German energy transition
- Perspectives and programmability (?!)
 - Biogas in the electricity sector: high demand and new role
 - Biomethane: greening Germany's gas grids and streets
- Conclusions

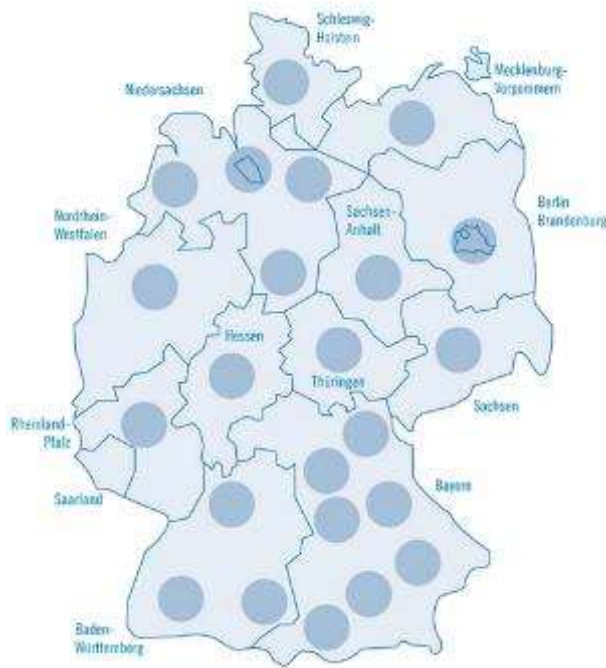
The German Biogas Association



4900 members
throughout Germany



- Operators of biogas plants
- Technology manufacturers
- Research institutions
- Public authorities
- Feedstock providers
- Interested individuals



43 employees
dedicated to the topic

Main objective: promotion of the biogas sector

- Definition of legal framework and technical standards
- Exchange of information
- Lobbying on federal, state and EU level



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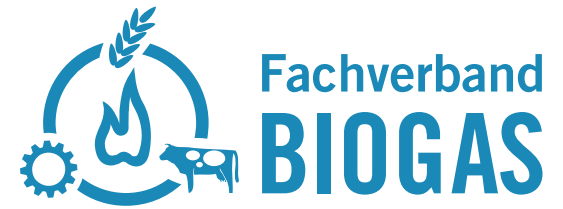
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Biogas and the German energy transition



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The German public is very much in favor of climate protection...



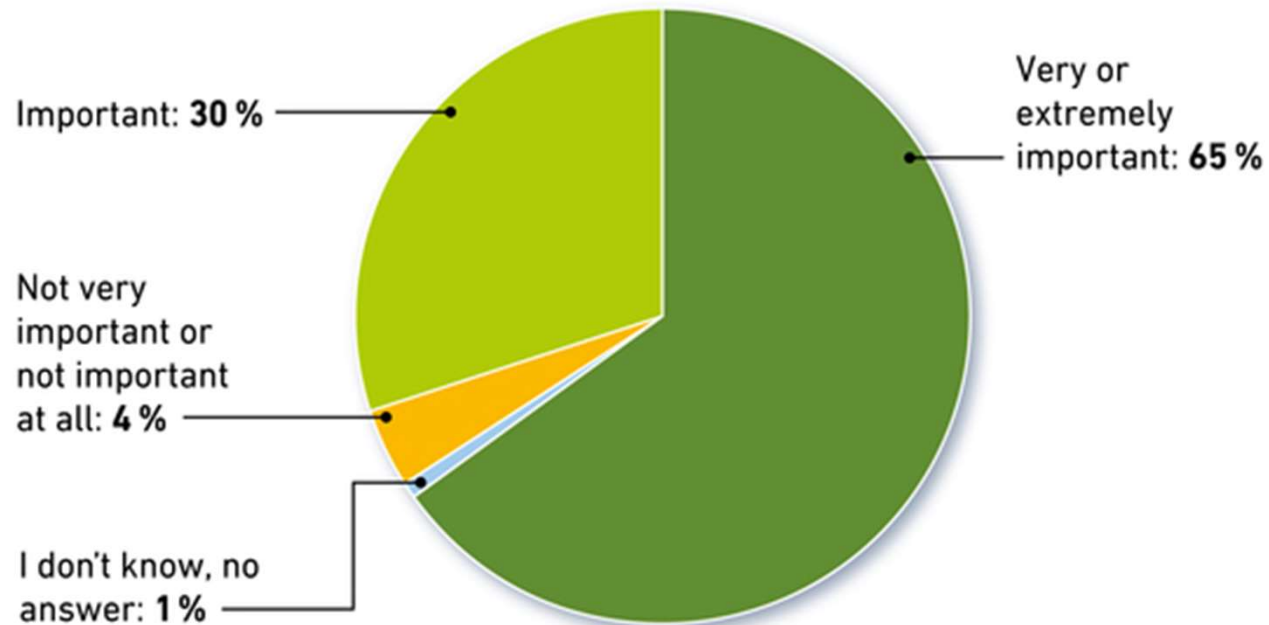
... and supports renewable energy



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95% of the German population support further expanding renewable energy

Increased use and expansion of renewable energy is...



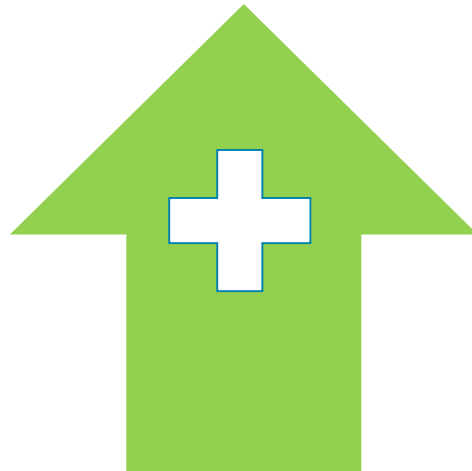
Source: Poll from Kantar Emnid commissioned by the Renewable Energies Agency, 1,016 polled
As of: 7/2017

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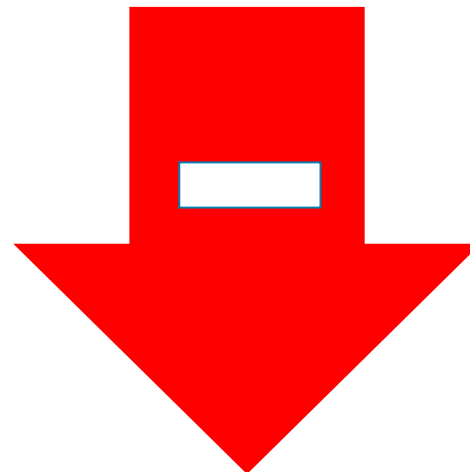


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The German energy transition: New dynamics, but old barriers



- Favorable public opinion
- Government wants to reach 65 % RE share in electricity sector by 2030
- „Coal compromise“ of February 2019: coal phase out by 2038
- Draft of the Climate Protection Act: 95 % GHG reduction in all relevant sectors by 2050

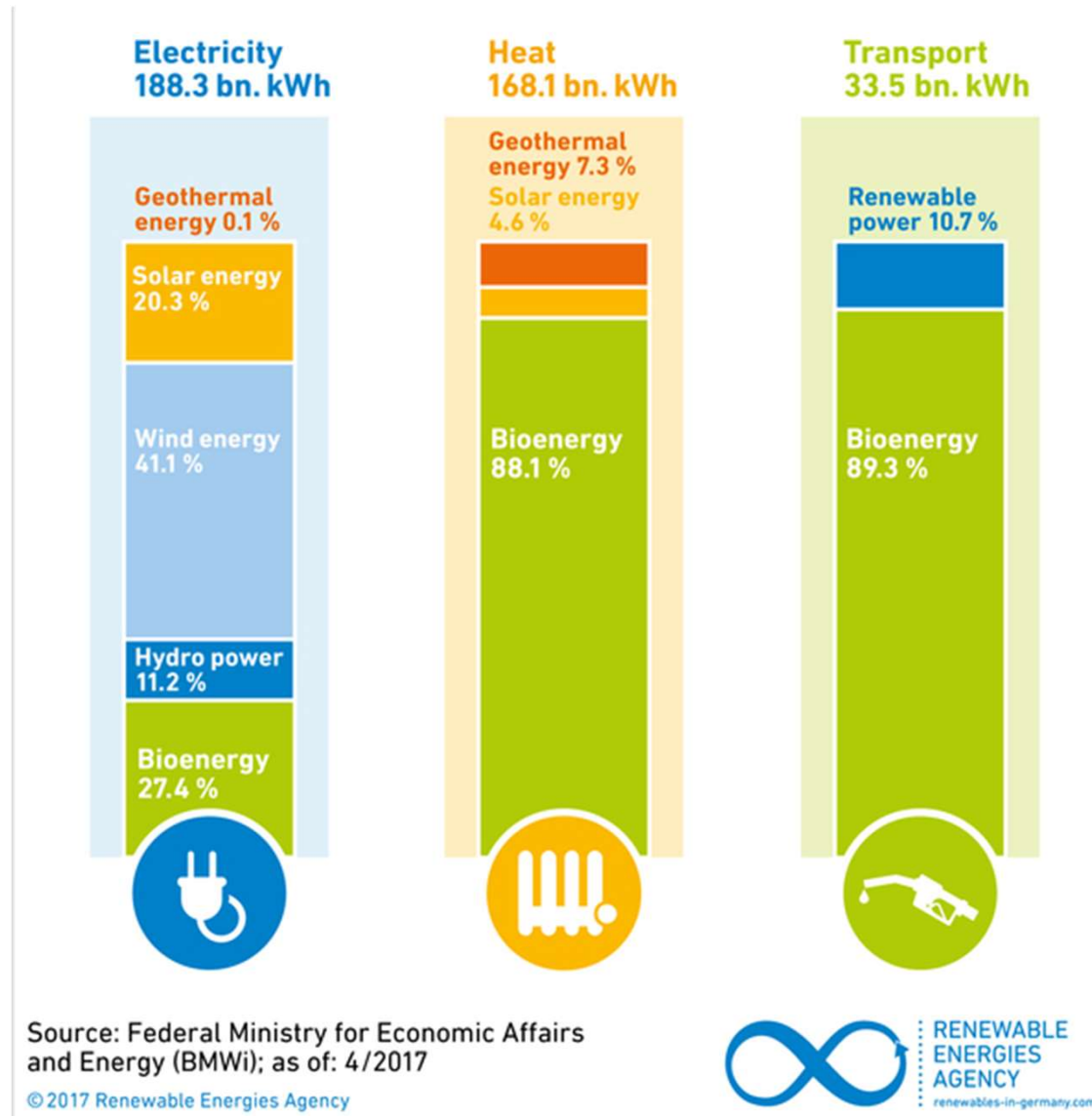


- Measures taken almost exclusively in the electricity sector
- Government very reluctant to introduce „unpopular“ measures
- Very restrictive, incoherent biomass policy

Bioenergy plays a major role in all sectors



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And the biogas sector remains strong



	2017*	Forecast 2018**
Number of biogas plants (biogas plants with biomethane injection)	9,331 (195)	9,494 (200)
Installed electric capacity in MW	4,550	4,843
Gross electricity production in TWh per year	32.98	33.13
Households supplied with biogas-based electricity in millions	9.4	9.5
CO₂ reduction by biogas in million tonnes	19.9	20
Turnover in Germany in Euro	9.3 Billion	9.3 Billion
Jobs in the biogas sector	47,000	47,000

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* Own extrapolation based on country data / plant register BNetzA

** Based on a expert survey / plant register BNetzA



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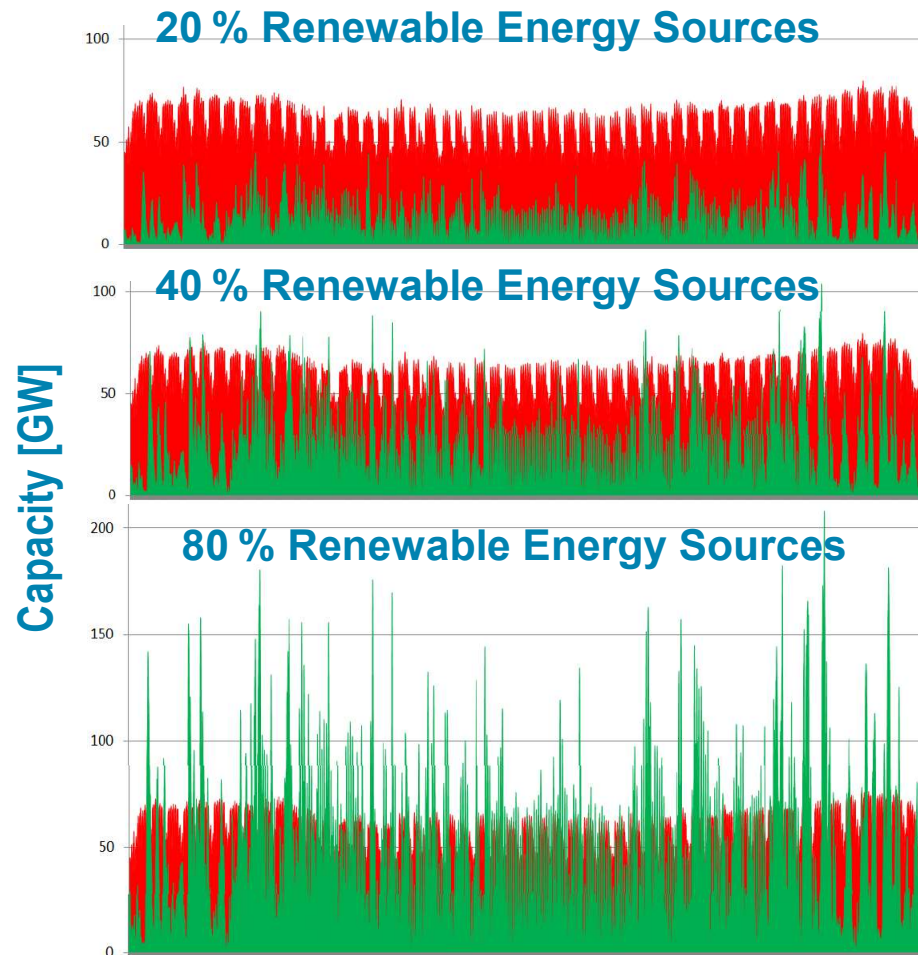
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Biogas: new role and high demand in the electricity sector



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New role of Biogas in electricity: flexibility instead of base load



With increasing share of
RES, baseload loses
importance

Flexible systems fill the
valleys of wind and sun

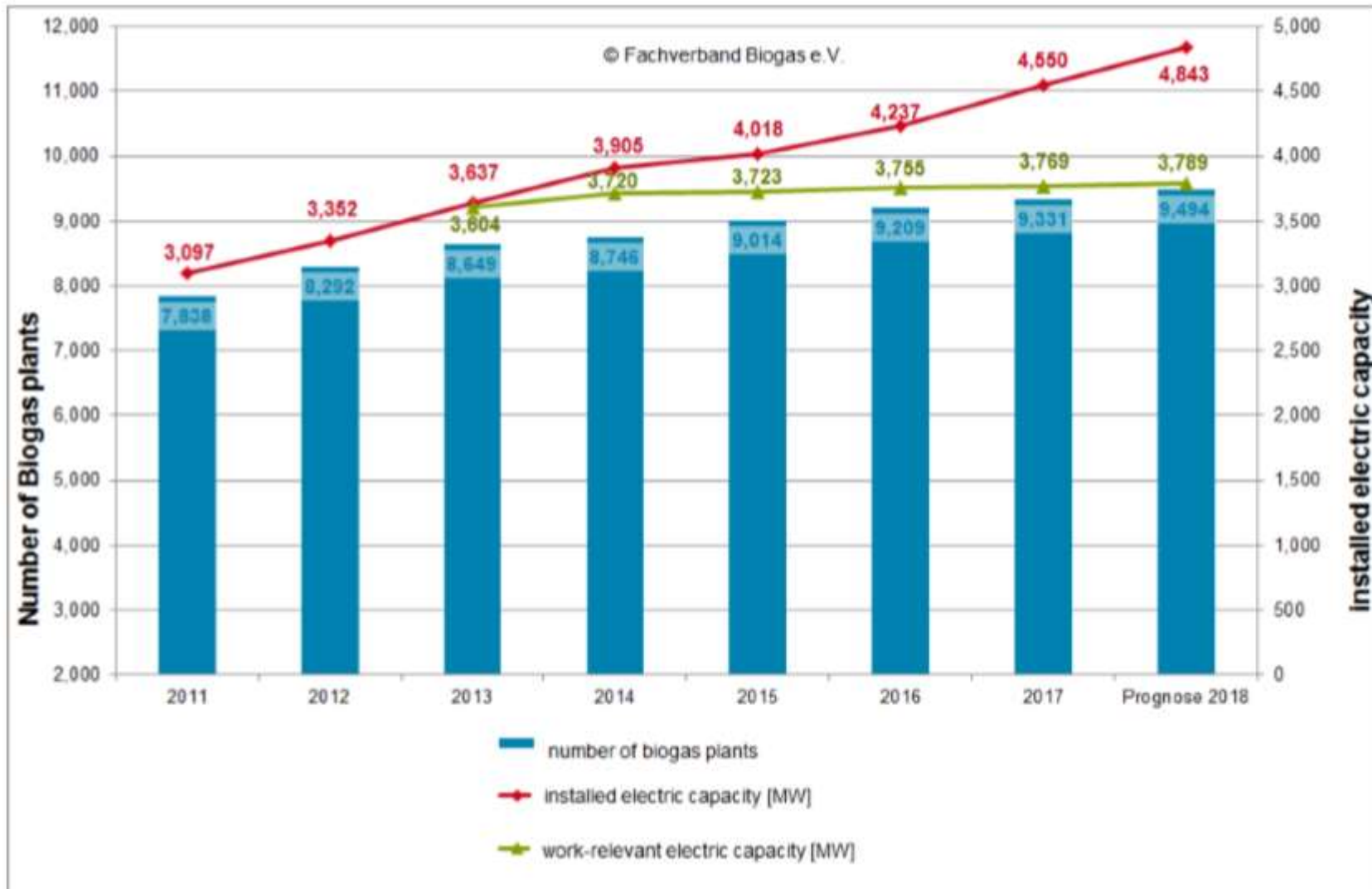
→ CHP with bioenergy &
natural gas

→ New role of biogas

red Demand

green Production Wind
& Solar

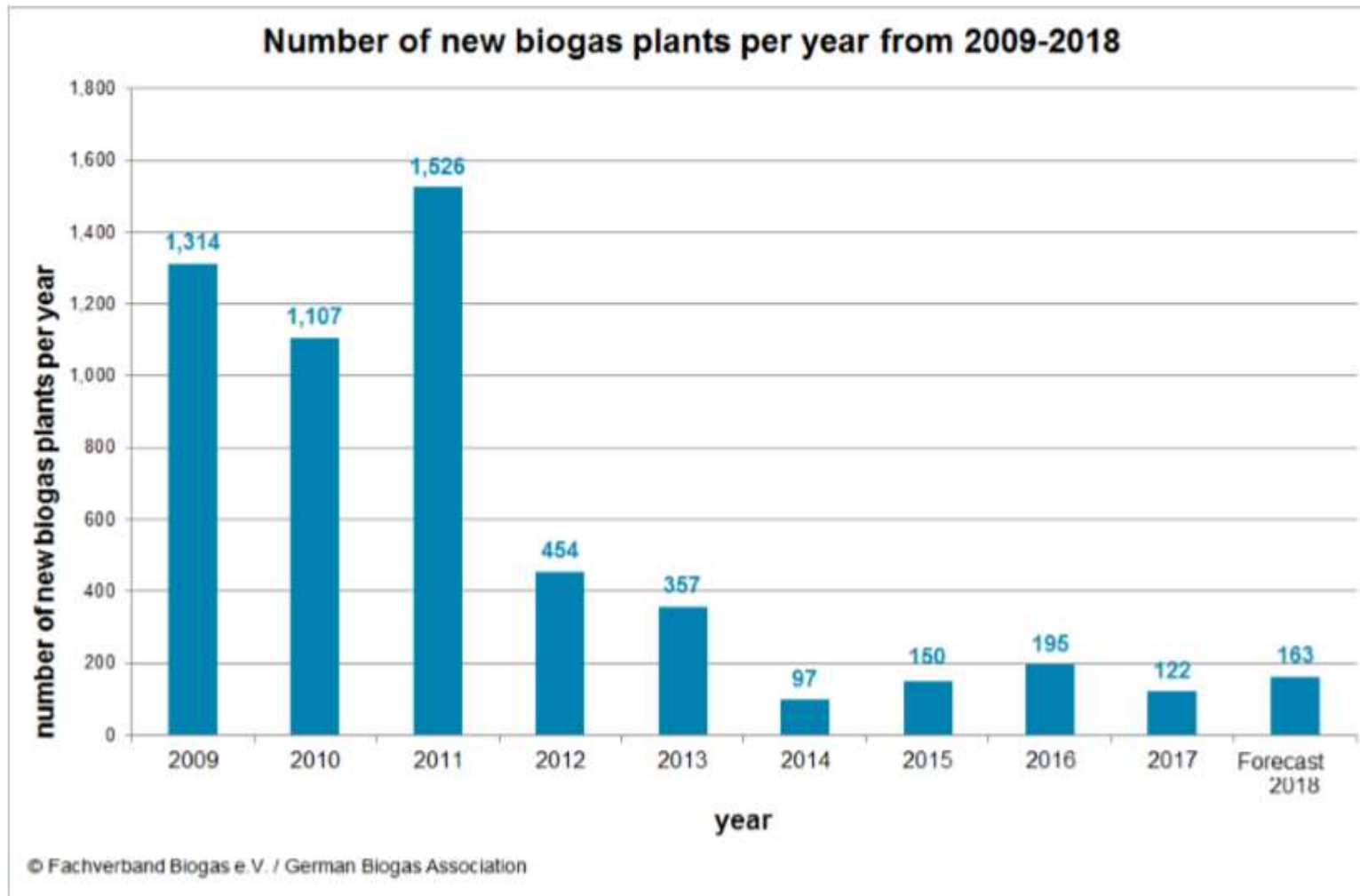
Results are starting to show



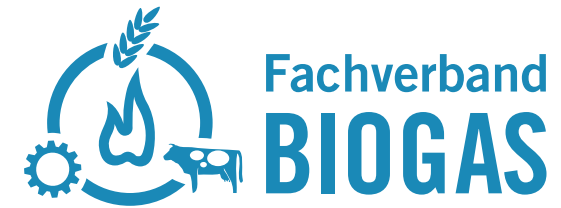
...but the Renewable Energy Sources Act has been stalling biogas ever since 2014



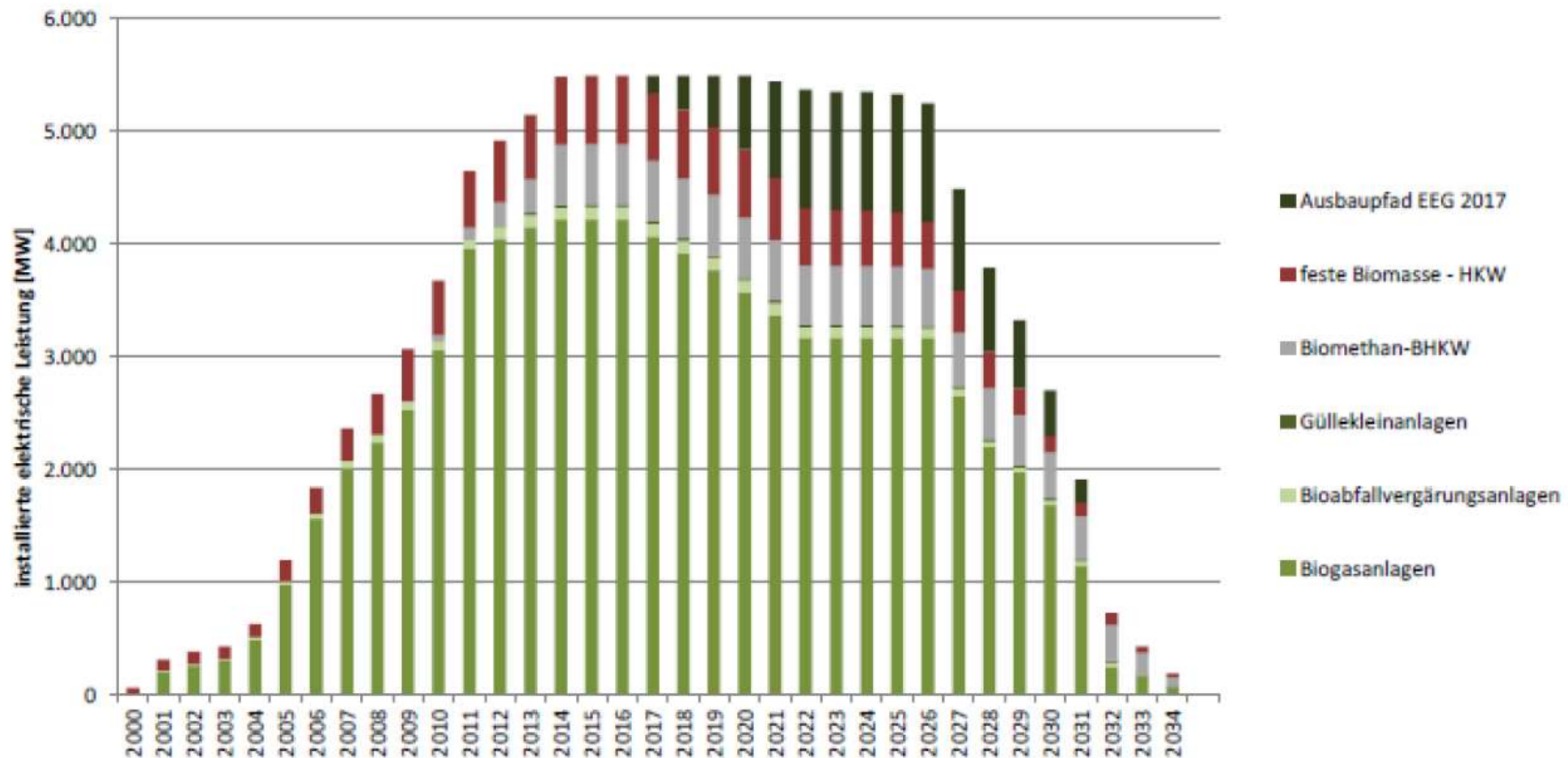
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... and we are lacking a mid-to longterm perspective



- Existing biomass plants may participate in the national tender, yet the government has not yet decided on a grow path for the auctions after 2022





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Biomethane: greening Germany's gas grids and streets

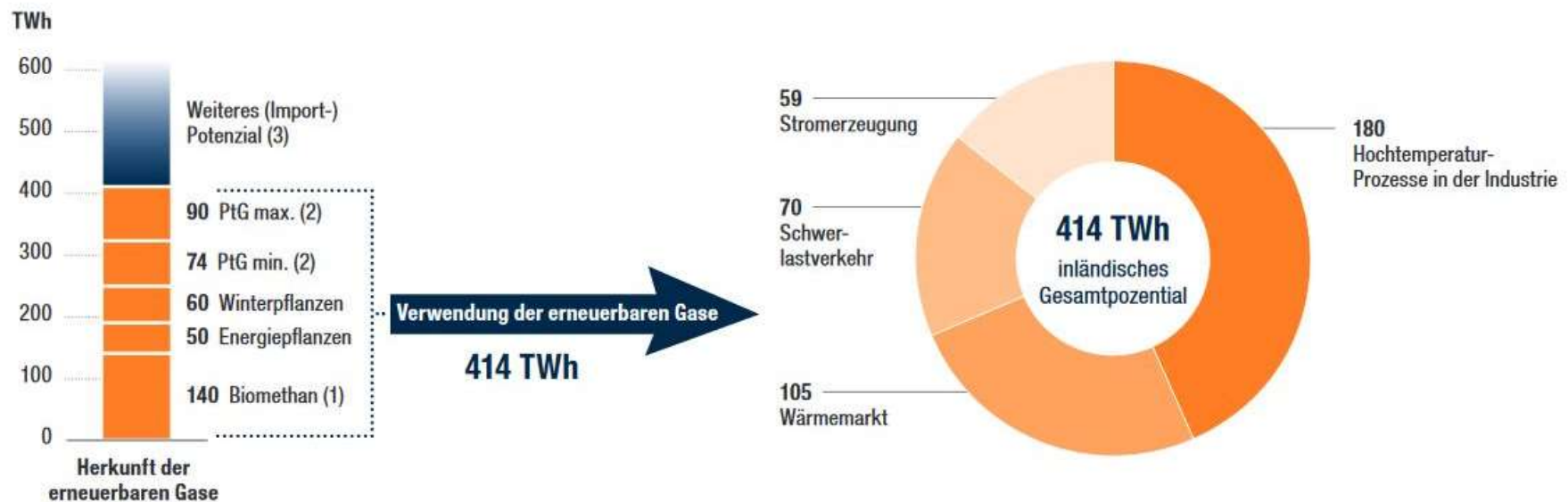


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Domestically produced green gases can cover half of Germany's 2050 gas demand



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Quelle: Navigant/Ecofys

(1) Biomethan aus biologischen Abfall- und Reststoffen; (2) PtG min. = Basisleistung, PtG max. bei maximaler installierter Leistung der Anlagen; (3) Weiteres Potenzial: Grüngas-Importe und „blauer“ Wasserstoff aus Erdgas durch Abspaltung an der Quelle.

Achievements and barriers in Germany

Achievements

- 3.2 million t CO₂ reduced
- approx. 200 Biomethane plants provide
 - 1.7% of renewable electricity,
 - 2.7% of renewable heat,
 - 1.1% of renewable vehicle fuel consumed in Germany

Barriers

CHP sector

- Main instrument for development is the Renewable Energy Sources Act

Heat market

- Heating applications are hardly supported (obligation to use in CHP due to higher CO₂-reduction)

Fuel sector

- Stagnating CNG vehicles sales
- National biomethane quota far below RED II level

International Trade

- Prohibitive national legislations
- Lack of EU-wide mass balance system

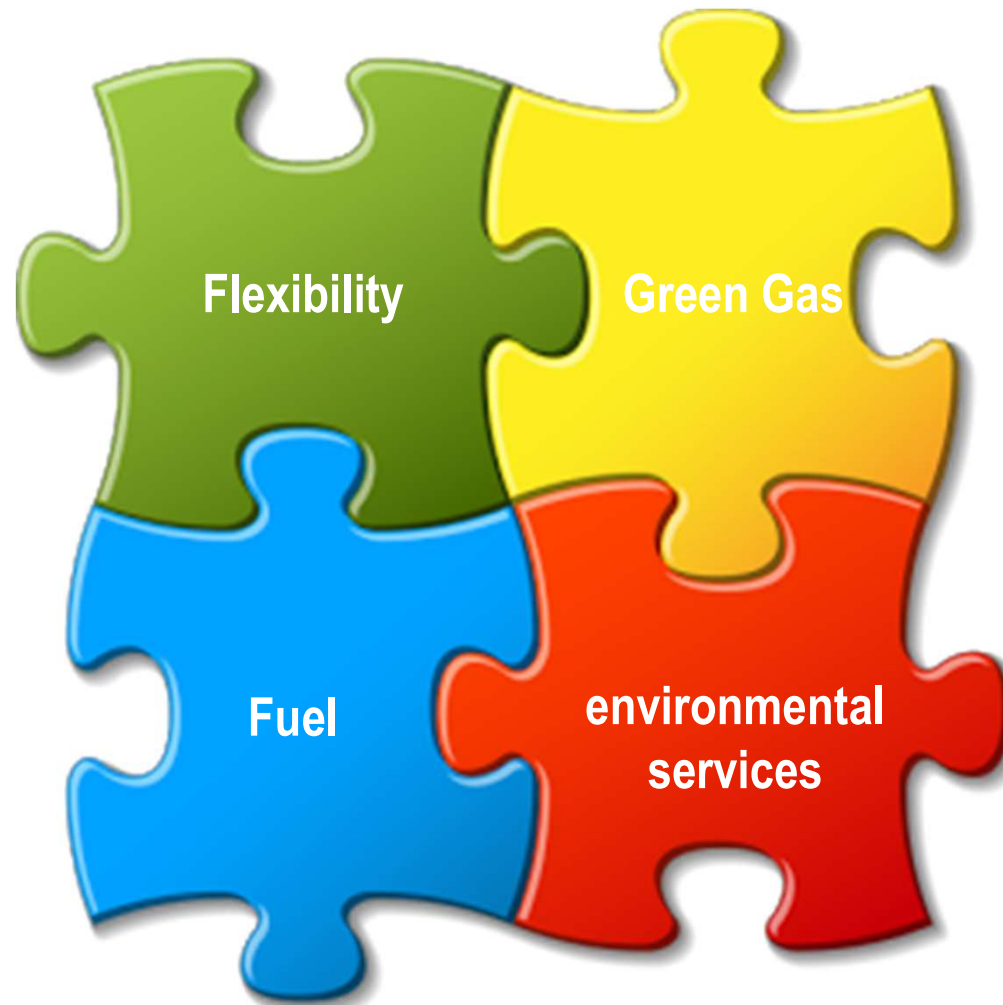
Conclusions

- The German government is very incoherent in its current energy and climate policies:
 - Ambitious targets, which can be reached only with bioenergy
 - Yet very restrictive policies, especially for biomass
- The Biogas sector suffers greatly from this lack of perspective and plannability
- Stabilization and optimization of the existing plants is our current focus
- While we have achieved options for existing plants in the Renewable Energy Sources Act, many conditions need yet be improved in order to actually work
- In the long run, the Renewable Energy Sources Act will not be the ideal means of incentivization for biogas
- Biogas has many advantages, which will have to be incentivized individually

The Future of Biogas in Germany
is a puzzle – worth and ready to be solved



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Thank you for your attention!

