



Energy AG

**Deutsches Eigenkapitalforum 2013, Frankfurt/M.
November 11th & 12th, 2013**



Why Cogeneration?

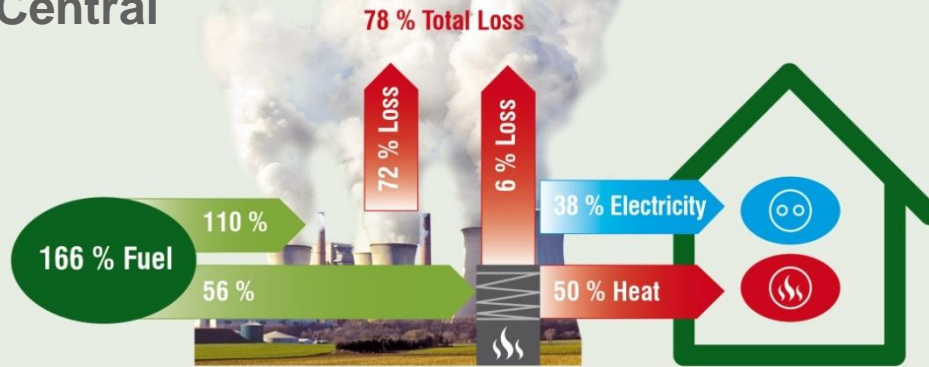
Cogeneration (CHP)

Decentral



Separate Generation (Power Station + Boiler)

Central



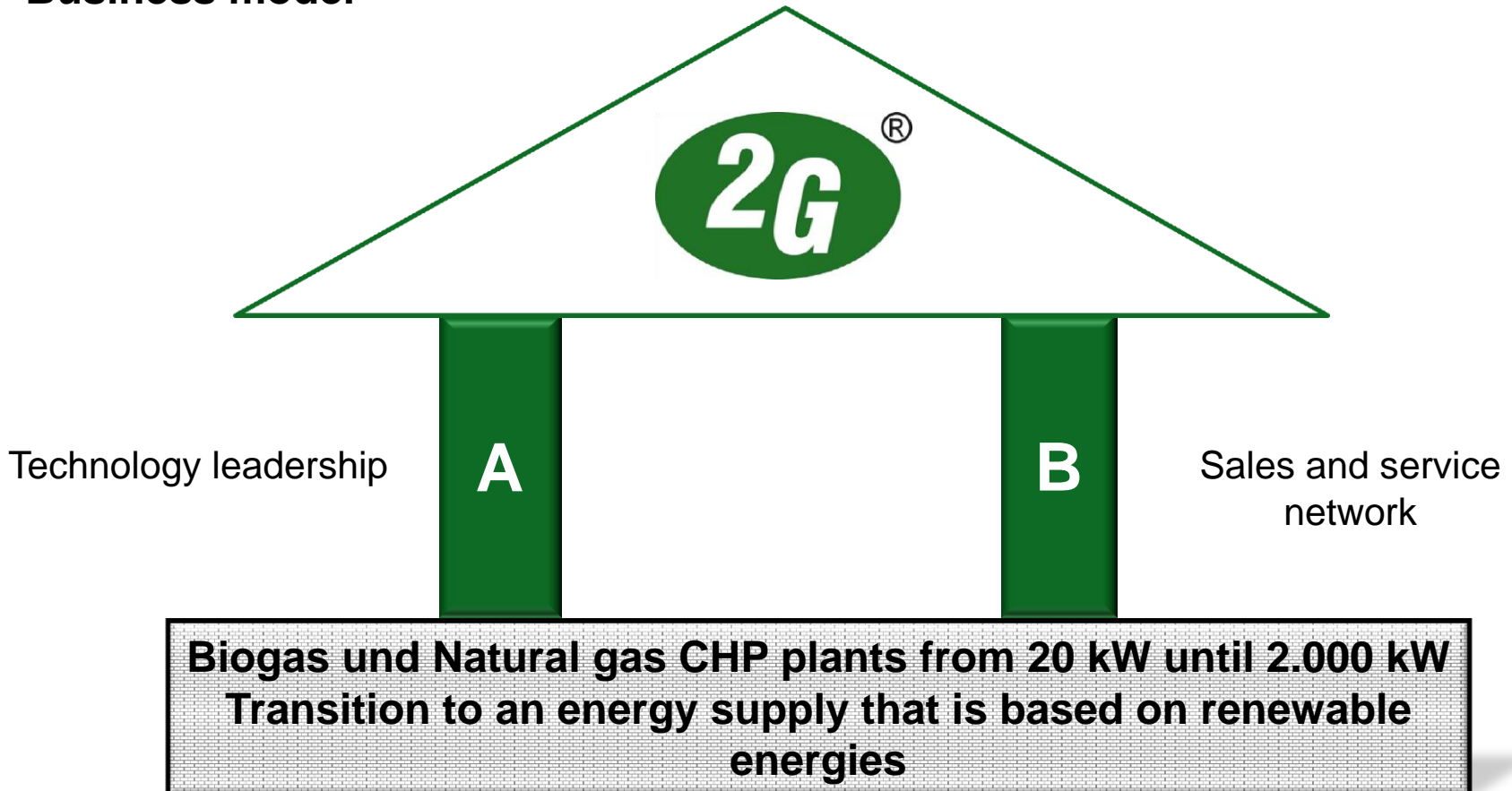
Technical Advantages CHP

- The heat of the combustion process can be used (up to 90% total efficiency)
- Decentral and highly flexible/steerable
- Reliable supply of energy
- Reduction of CO₂ Emissions
- High availability and high durability



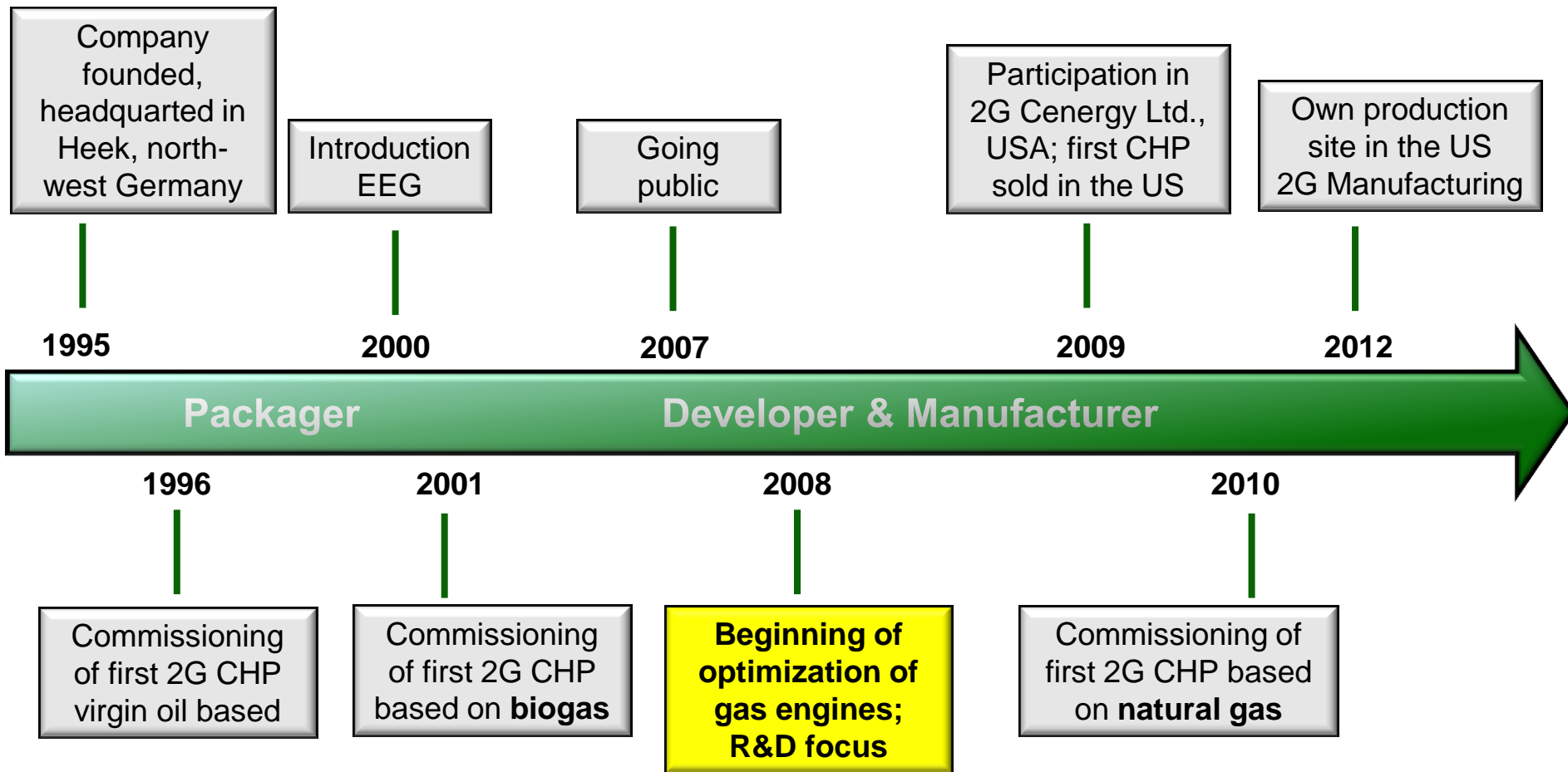
Structure and Strategy

Business model





The Company's Milestones





Competition

CHP ranking 2012 (total installed electrical power in Germany)

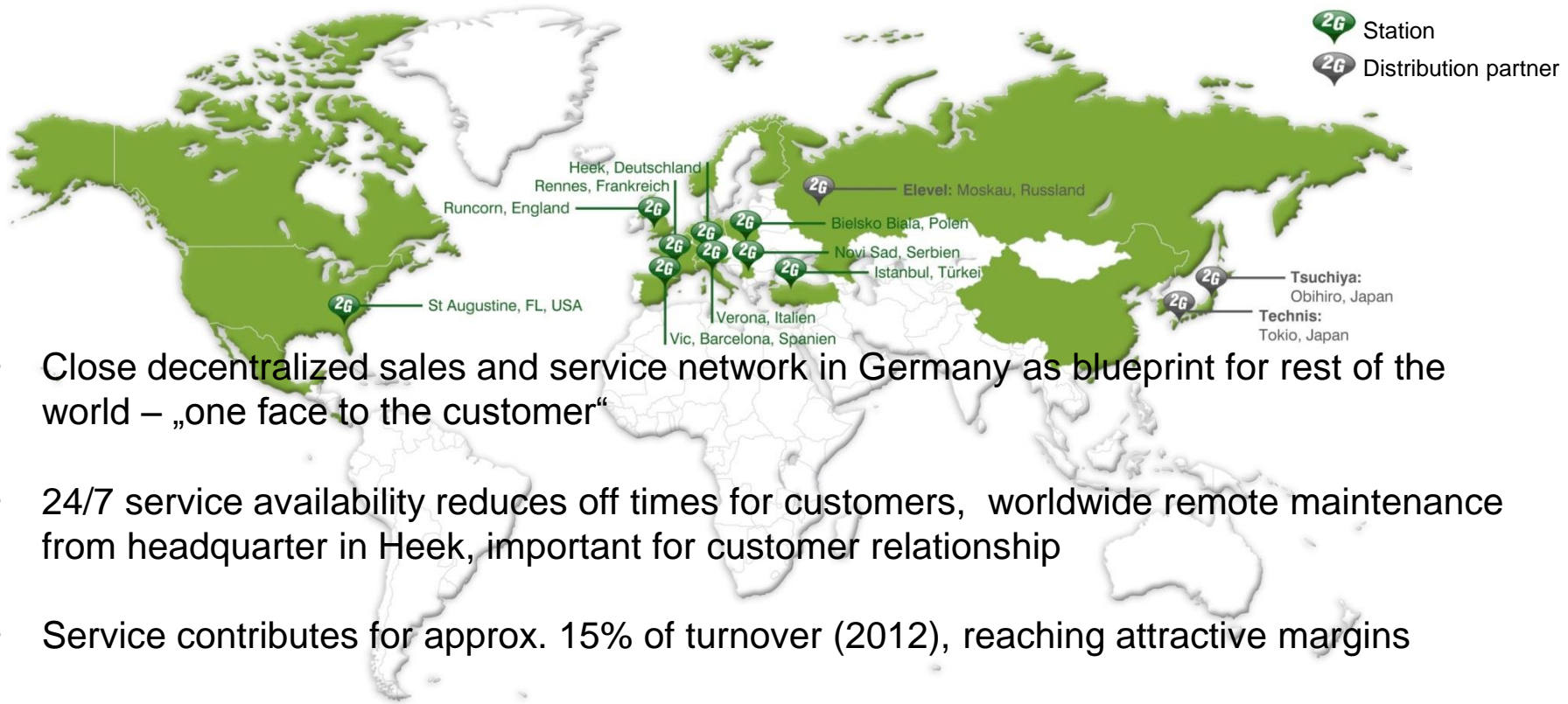
Rank	Company	2012	2011	2010
1 (1)	MWM	234,035	279,923	190,631
2 (3)	GE Jenbacher	158,933	190,853	-
3 (4)	2G Energy	104,958	183,740	94,805
4 (2)	MTU Onsite Energy	80,351	199,846	66,436
5 (15)	AGO	40,450	15,613	16,120
6 (6)	Elektro Hagl	39,275	149,645	-
7 (5)	Schnell	37,249	29,667	99,495
8 (8)	ETW Energietechnik	34,085	27,670	23,274
9 (9)	Zeppelin	29,930	16,717	37,620
10 (14)	ESS (Viessmann)	29,122	72,078	11,800

Source: *Energie und Management*



The 2G Group

Sales and Service Network - 4000 CHP plants in more than 20 countries



- Close decentralized sales and service network in Germany as blueprint for rest of the world – „one face to the customer“
- 24/7 service availability reduces off times for customers, worldwide remote maintenance from headquarter in Heek, important for customer relationship
- Service contributes for approx. 15% of turnover (2012), reaching attractive margins
- Cooperations, sales & service partnerships offer further growth opportunities



The 2G Group

Core Competence: Gas Engine Technology (2G Drives GmbH)

- 40 technicians and engineers
- Modification of the combustion process
- Modification of piston geometry (own patent)
- Development of own engine components (spark plugs, valves with rotocap, cylinder heads, gas mixer, top land ring...)
- Development of own CHP periphery (Activated carbon filter, gas cooling,...)
- Individual adaptation of the compression ratio according to gas quality
- First hydrogen projects have been realized





The Right Products

Savings as a result of engine optimization

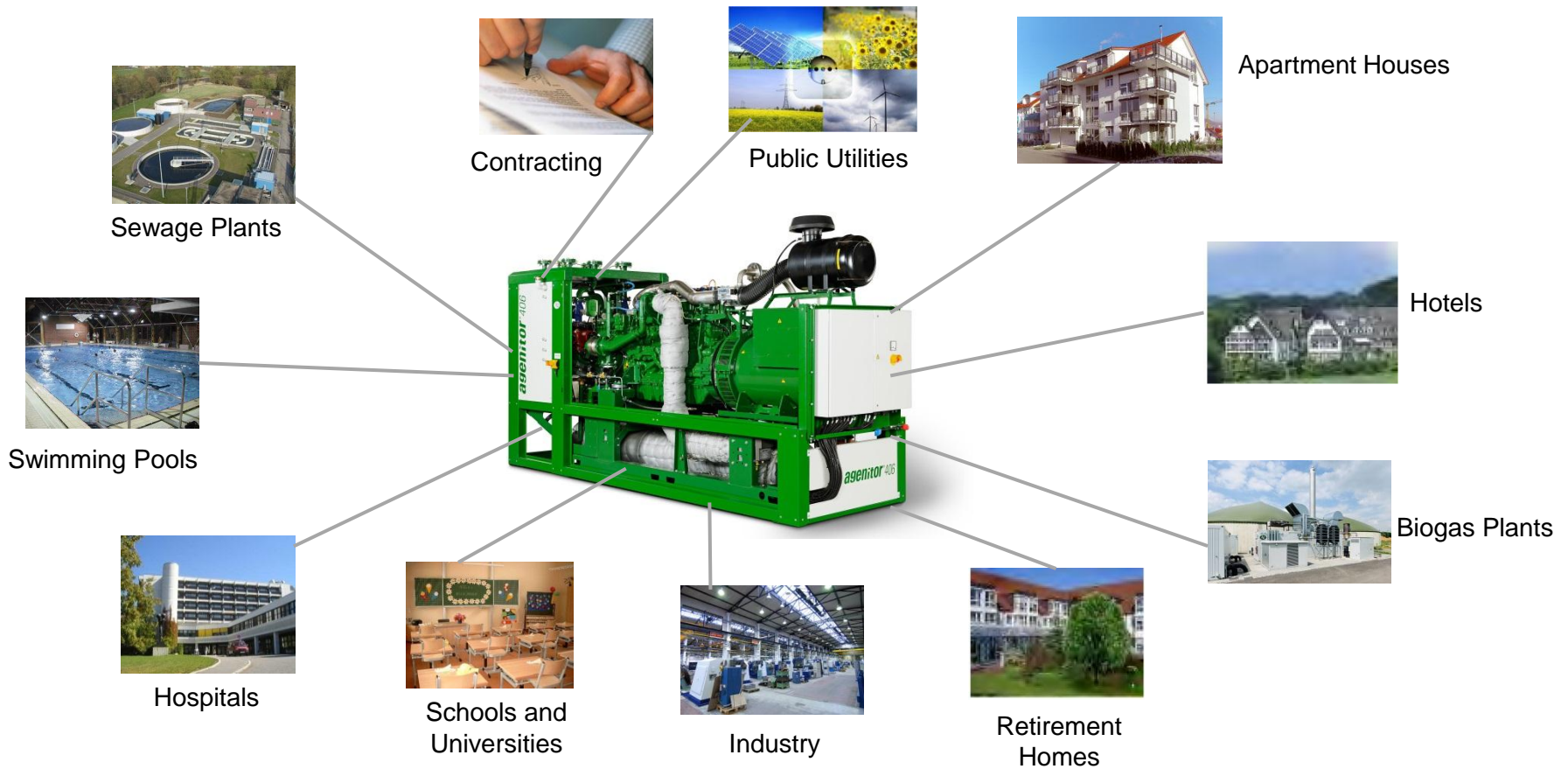
Non-optimized engine vs. agenitor		
	2G-KWK-250EG	<i>agenitor</i> [®] 406
Electrical power	250 kW	250 kW
Electrical efficiency	37.5 %	42.5 %
Gas consumption	667 kW/h	589 kW/h
Gas price	0.05 ct/kWh	0.05 ct/kWh
Gas cost per year	200,100 EUR	176,700 EUR
Additional invest agenitor 406		30,000 EUR
Annual savings		23,400 EUR
ROI of additional invest		1.28 years

-> Additional CO2 savings through less gas consumption: 95 tons per year



Why Cogeneration?

Fields of application





Broad Range of Customers

Focus on customer types for natural gas market

Utilities



- Forced to change their business model, energy transition inescapable
- Looking for secure, steerable, decentral CHP solutions to keep their assets valueable

IPPs / municipalities



- Keen to erect own energy supply sources, e.g. buying back of grids
- Independency from utilities' pricing power; sustainable energy supply for consumers

Industry & commerce



- Efficiency of CHP is key to provide electricity, heat/cold, steam in production processes
- Want to become independent from utilities as suppliers & improve carbon footprint



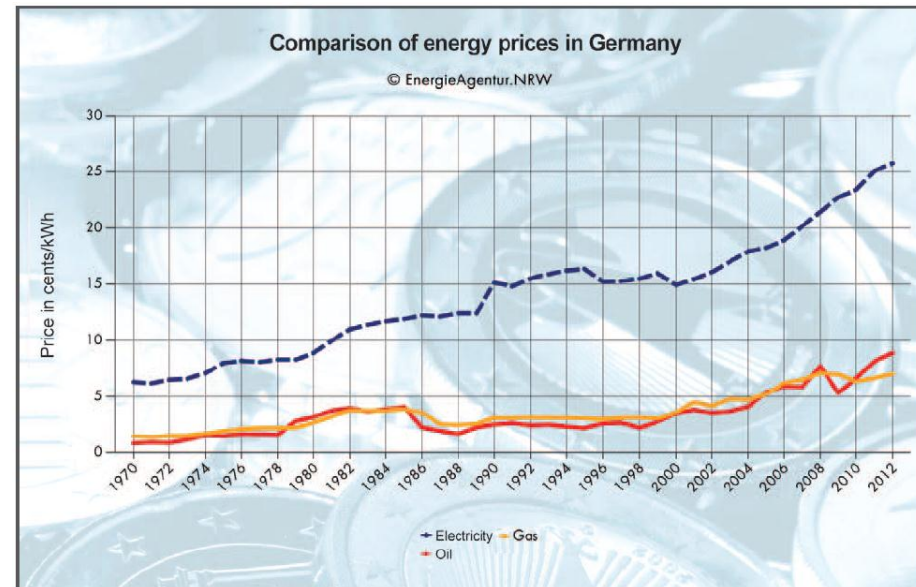
Market Drivers

Natural Gas

- Business independent from subsidies
- Shale-gas-exploration shall provide energy supply at moderate price levels
- Existing gas grid infrastructure saves energy transports and provides security of energy supply
- Among fossil fuels natural gas holds the lowest CO2 emissions and the highest efficiency (climate protection)

Biogas

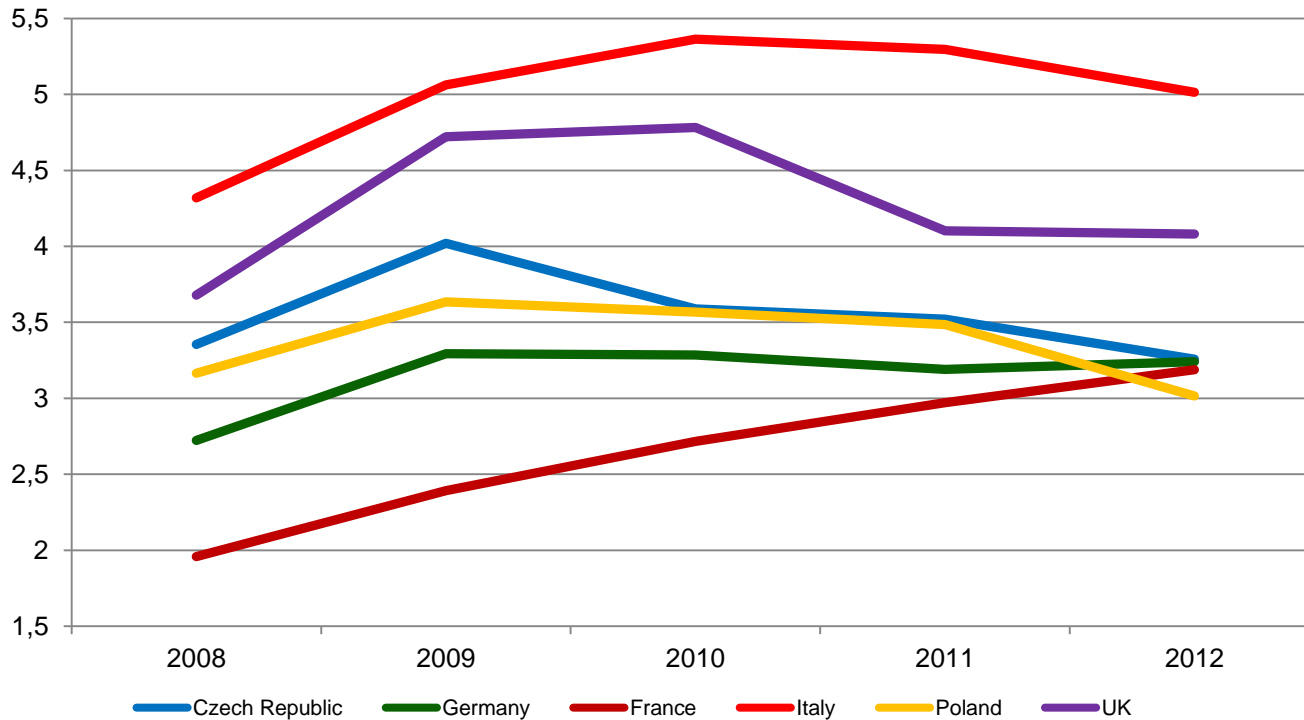
- EEG changed role of biogas within German energy mix: from base load to flexible, steerable power supply (power management)
- Internationally still solid demand
- Demand for other lean gas CHP plants like land fill gas, sewage gas
- CHP plants play a pivotal role in virtual power plants





Market Drivers

Attractiveness of spark spread – ratio of the electricity price to the gas price



> 3.5: market very attractive*

> 3.0: market quite attractive*

> 2.5: market becomes interesting*

Calculation is based on annual (net of tax) gas and electricity prices for industrial customers

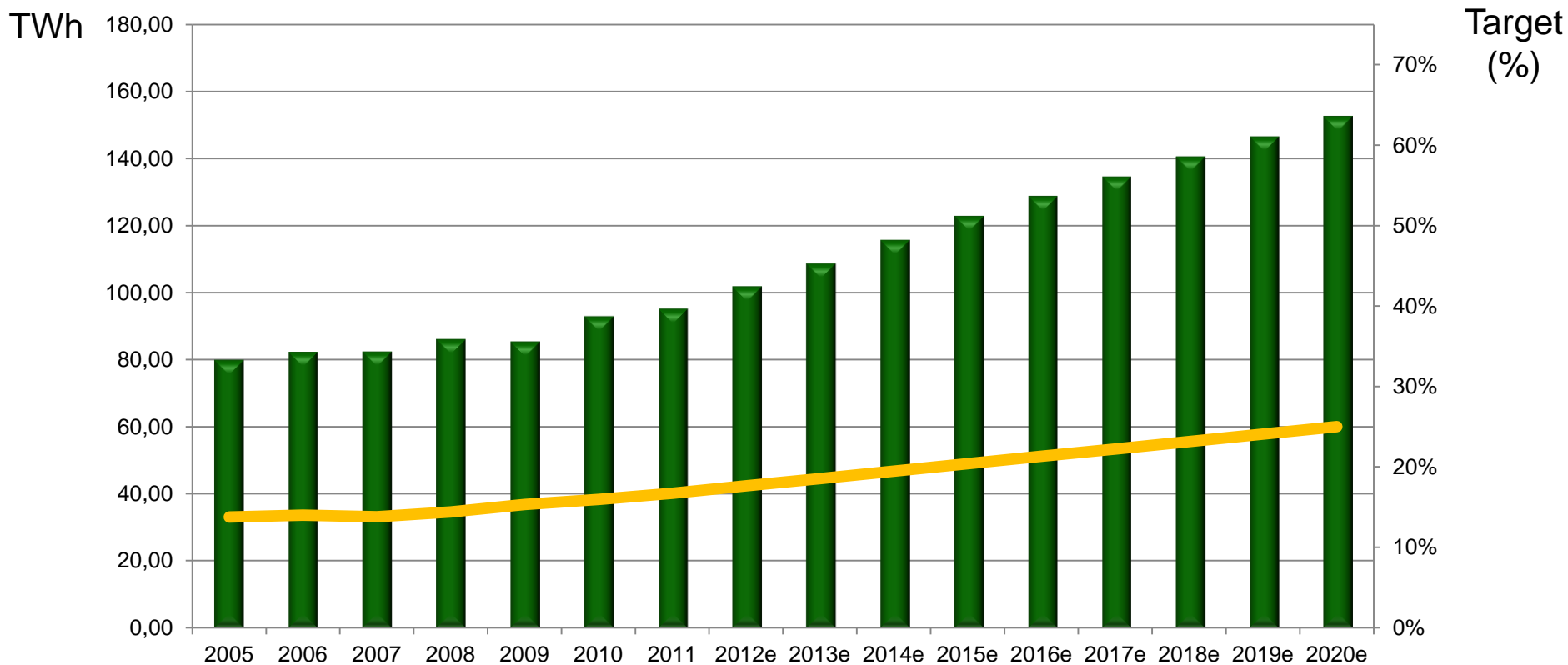
*Acc. to Delta-EE Institute

Source: Eurostat, BMWi, equinet Research



Market Drivers

CHP power production & targets in Germany

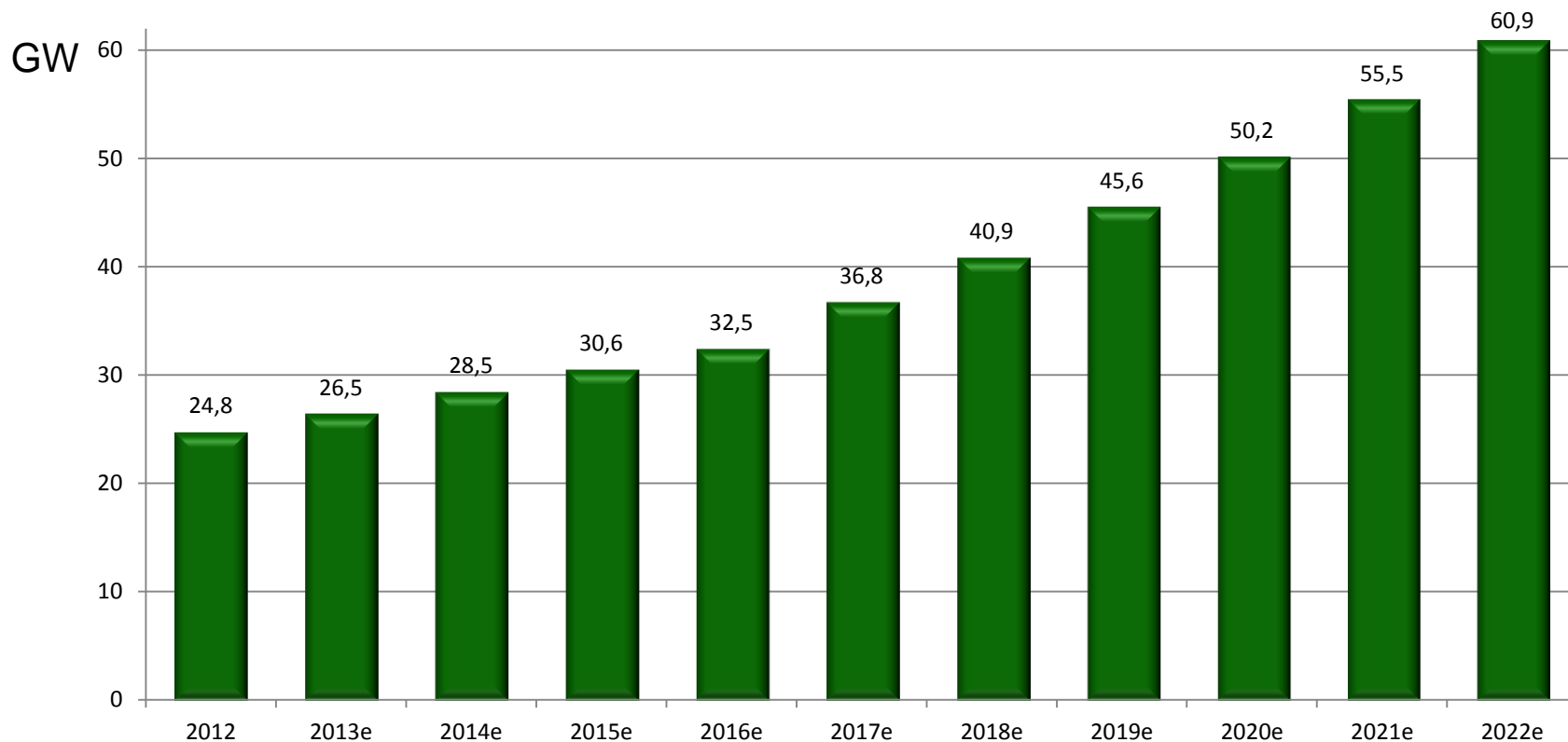


Source: equinet Research



Market Drivers

Commercial CHP capacity forecast Europe

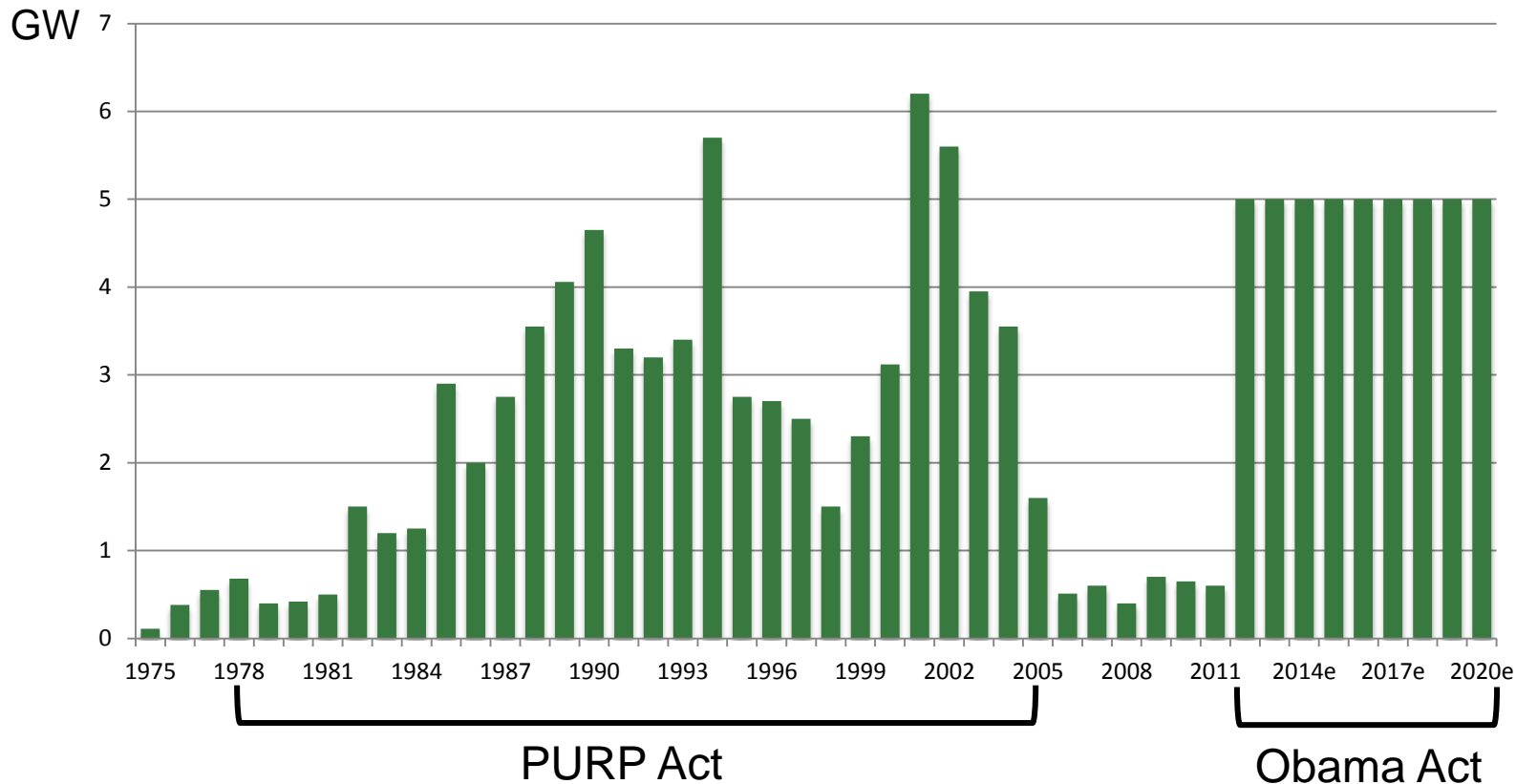


Source: Pike Research, equinet Research



Market Drivers

USA – CHP capacity additions & 2020 targets



Source: EEA 2012, equinet Research



US Market

Biogas

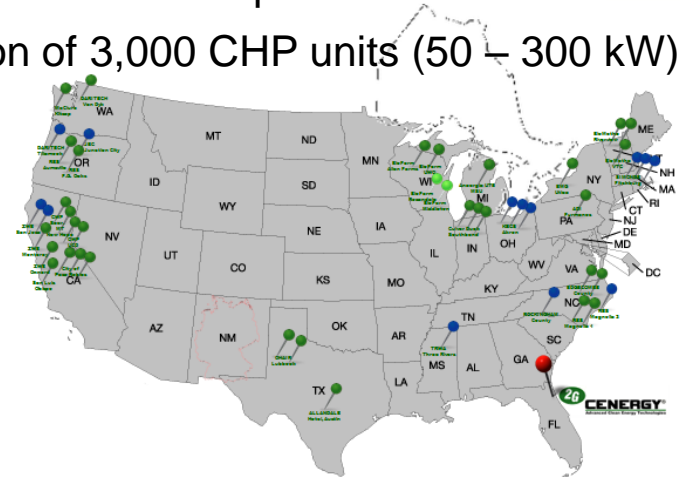
- Food waste treatment:
30 US \$ per ton subsidy + biogas (electricity & heat) + fertilizer

Natural gas

- Ample shale-gas-resources secure attractive natural gas prices in the near future (NG price: July 08: 13.06 \$ p. tcf, Apr 13: 4.95 \$ p. tcf)
- Spark spread strongly supports the economic calculation of CHP plants
- A program of the State of NY supports the installation of 3,000 CHP units (50 – 300 kW)
- 8 states to follow that move of NY

Other lean gases

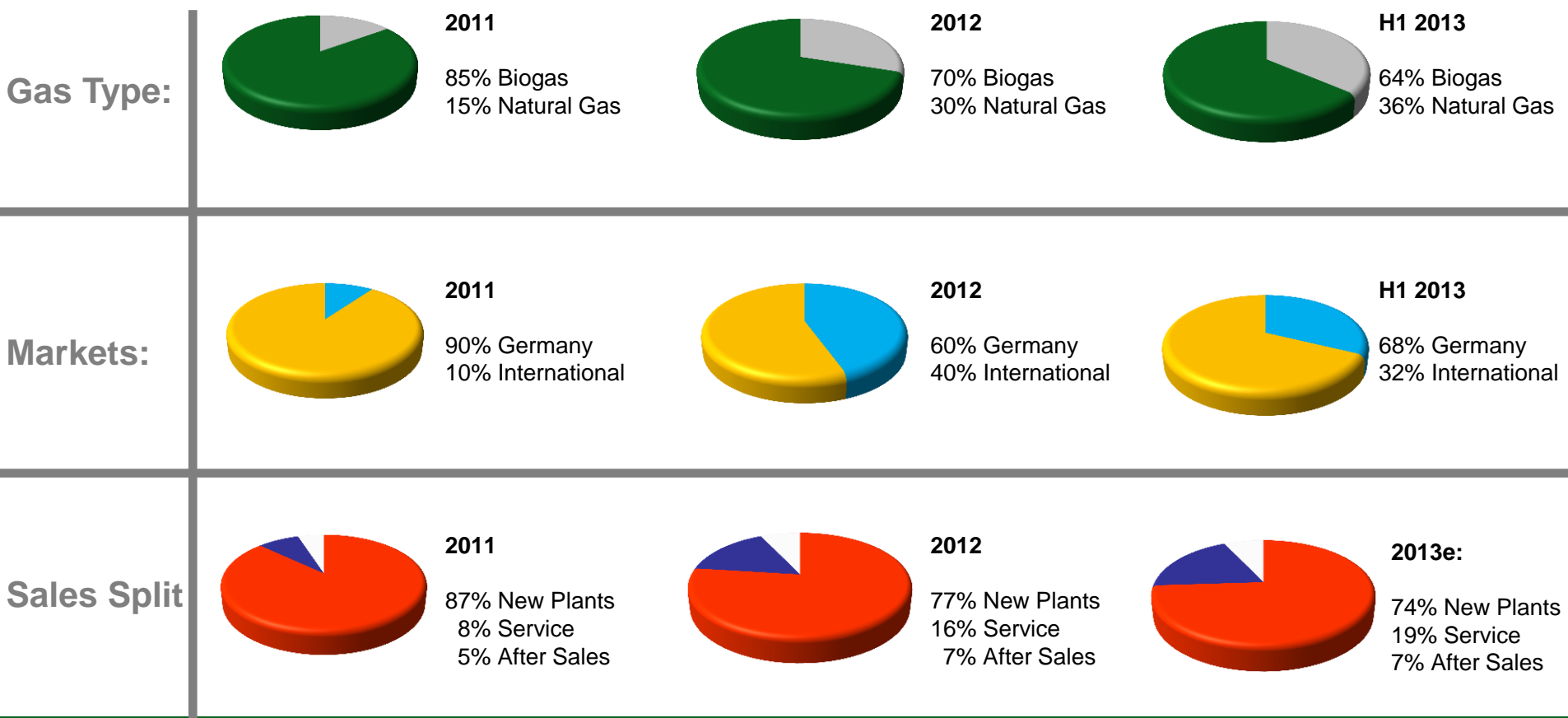
- Production Tax Credits (PTC) for using landfill gas for CHP plants
1.1 US \$ Cent per kWh over ten years





Finances

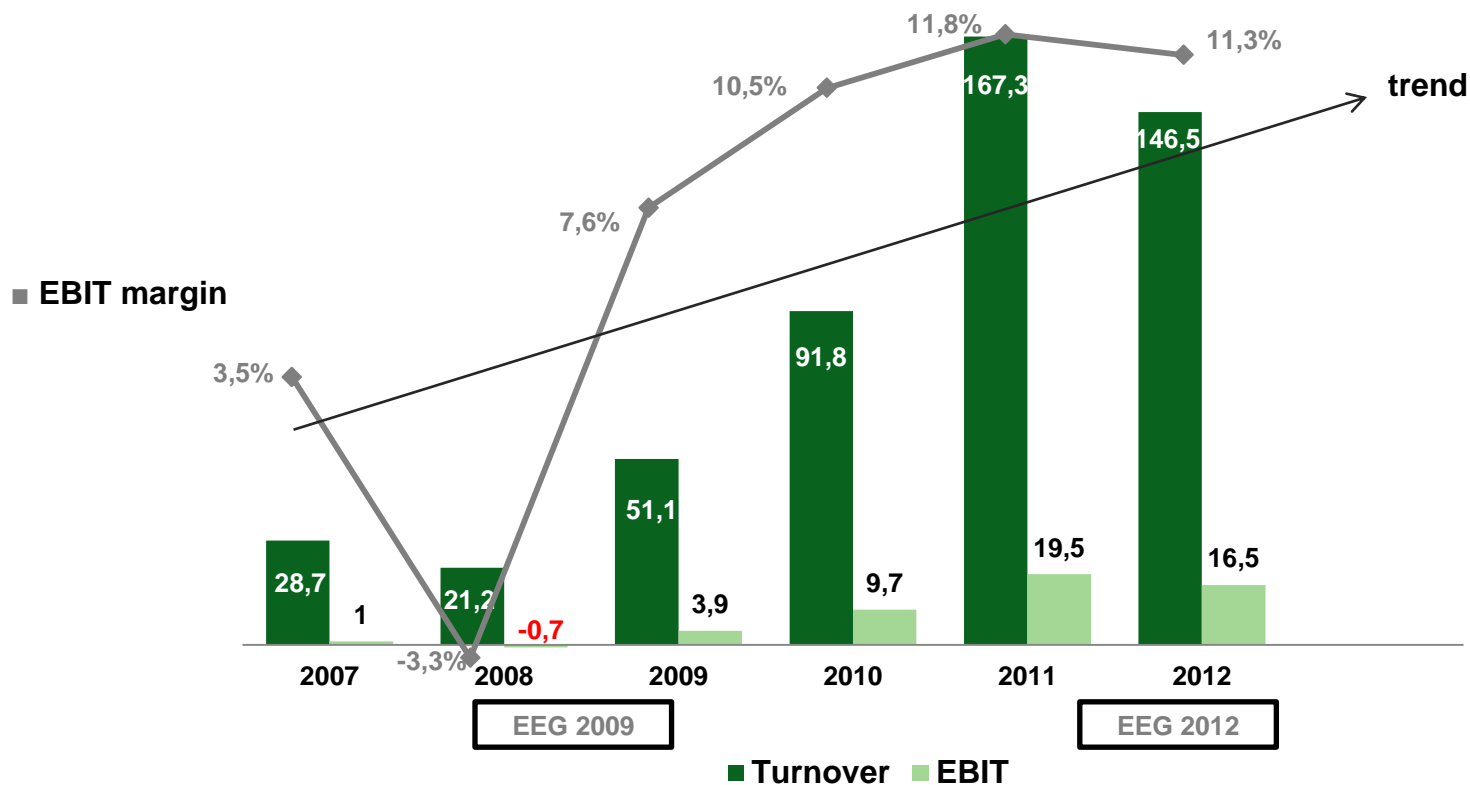
Sales Comparison: 2011 / 2012 / H1 2013





Finances

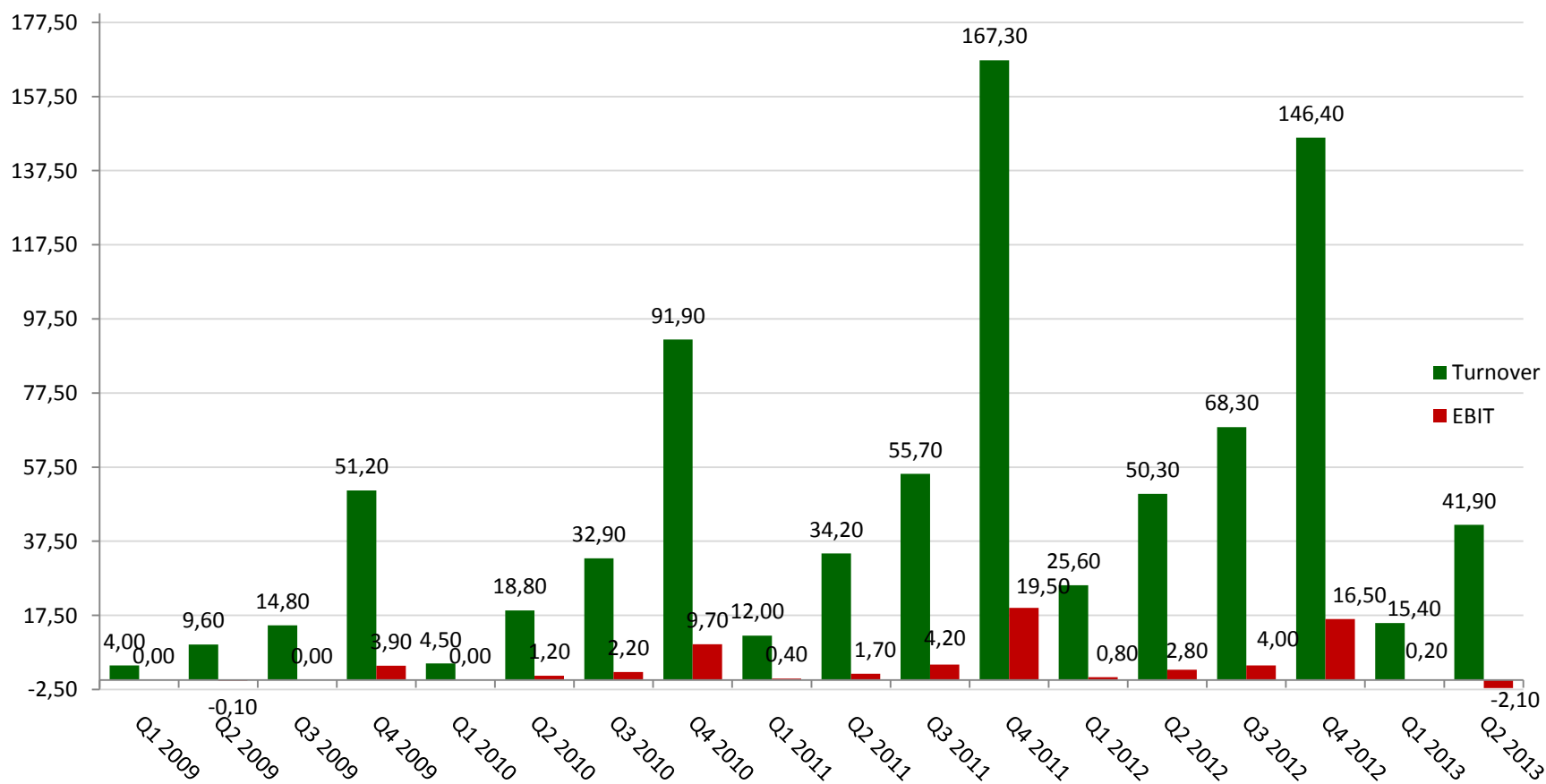
Development of sales and EBIT since 2007





Finances

Quarterly development of turnover and EBIT 2009 – 2013





Finances

Key figures

	20XXe	31 Dec. 2012	31 Dec. 2011	31 Dec. 2010	31 Dec. 2009
EBIT margin	15 %	11.3 %	11.8 %	10.5 %	7.6 %
Equity ratio	●	50.4 %	45.3 %	49.8 %	47.8 %
Return on equity	●	23.7 %	35.6 %	26.3 %	17.4 %
Cost of material ratio	< 65 %	65.4 %	75.3 %	76.7 %	81.4 %
Cost of personnel ratio	●	11.5 %	6.7 %	7.5 %	8.2 %



Outlook

2013 achievements and operative targets

- **Anti-cyclical investments taken**
 - Production capacity in Heek, Germany
 - New employees in Heek, mainly service technicians
 - Production facility & workforce in the US
- **Standardizations of production under way**
 - Assembly line for G-Box 20
 - Standard parts from component suppliers
 - 3rd test bench
- **Optimization of sales & service structures abroad**





Outlook

Targets

- Establishing the 2G brand in national and international markets
- R&D activities remain a crucial part of 2G's business model
- Offering assessable solutions for demanding energy supply – decentralized, flexible and efficient CHPs
- Looking for strategic cooperation's for the international sales & services activities
- Focus on Europe and Americas
- 2020: approx. 15 % EBIT-margin & turnover of approx. 300 mio. €



Thank you for
your attention!

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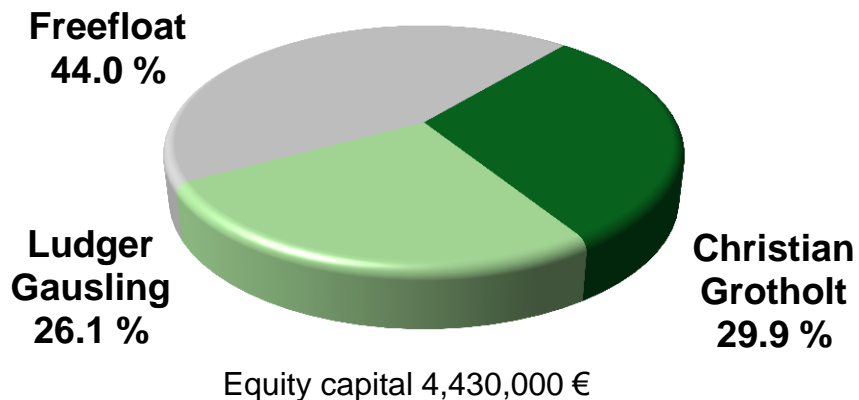


www.2-g.de



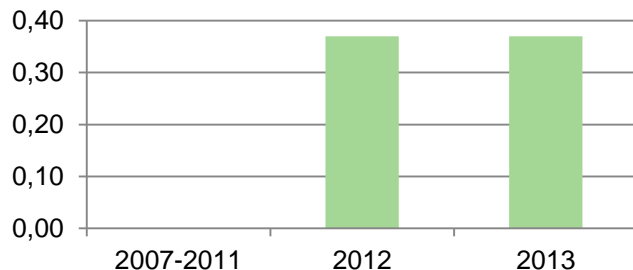
Appendix - 2G Energy AG Share

Shareholder structure

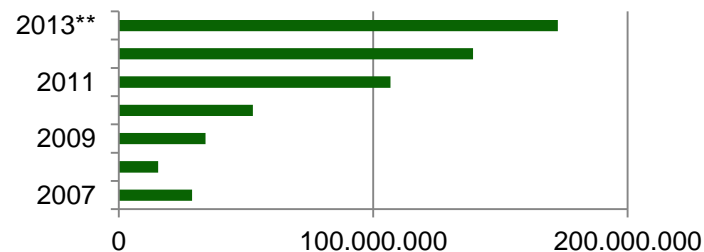


Listing: Entry Standard, Open Market
 IPO: Juli 2007
 ISIN: DE000A0HL8N9
 Reuters RIC: 2GBG
 Bloomberg: 2GB GY Equity

Dividends paid in €



Market Cap in €

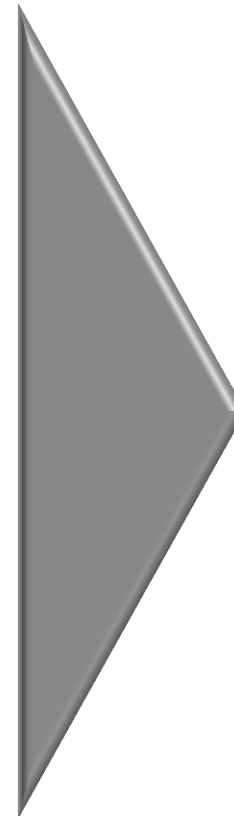
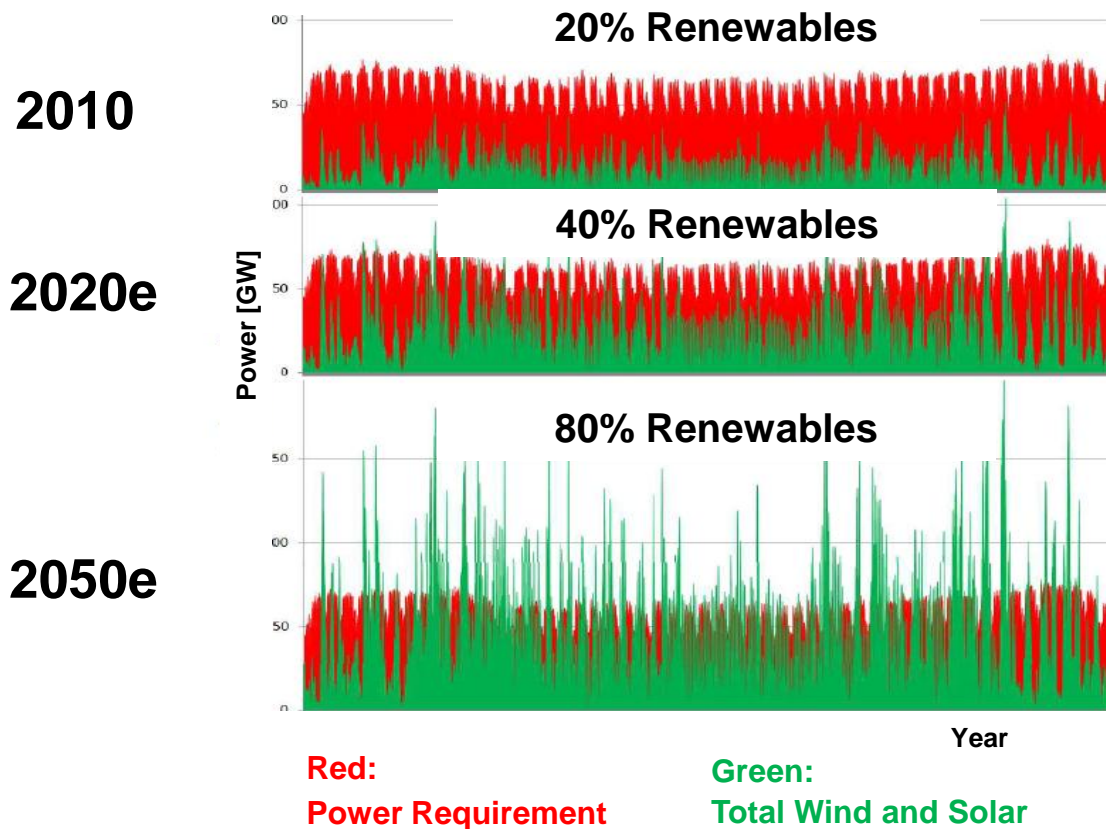


**XETRA Closing price 20. Mai 2013



Appendix - Situation in Germany

Changing Role of CHP technology – Based on Demand





Appendix - Customer References

2G very well established among utilities



Stadtwerke Münster





Appendix - Types of Customers

Share in revenues of customer types in 2012

