

# Biomethane roadmap for Austria

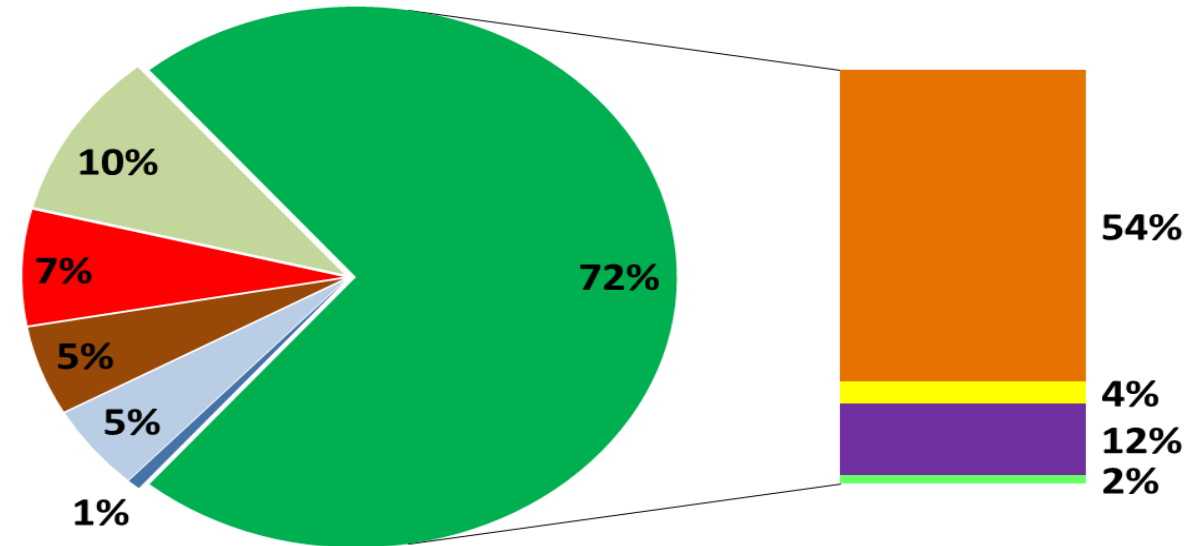
BIOMETHANE WS: Paris 23.11.2016

[Franz Kirchmeyr, Austrian Compost & Biogas Association]

# Development of biogas and biomethane in Austria

- CHP
  - ~ 290 plants producing electricity and heat
  - ~ 550 GWh<sub>el.</sub> + 300 GWh<sub>th.</sub>
- Biomethane production
  - 13 plants have installed an upgrading system and connection to the gas grid
  - ~ 2500 m<sup>3</sup> installed capacity
  - ~ 15 Mio Nm<sup>3</sup> biomethane production capacity but not reached yet
- One new plant is running to treat spent grain and produce steam and heat

# Share of currently used feed stock

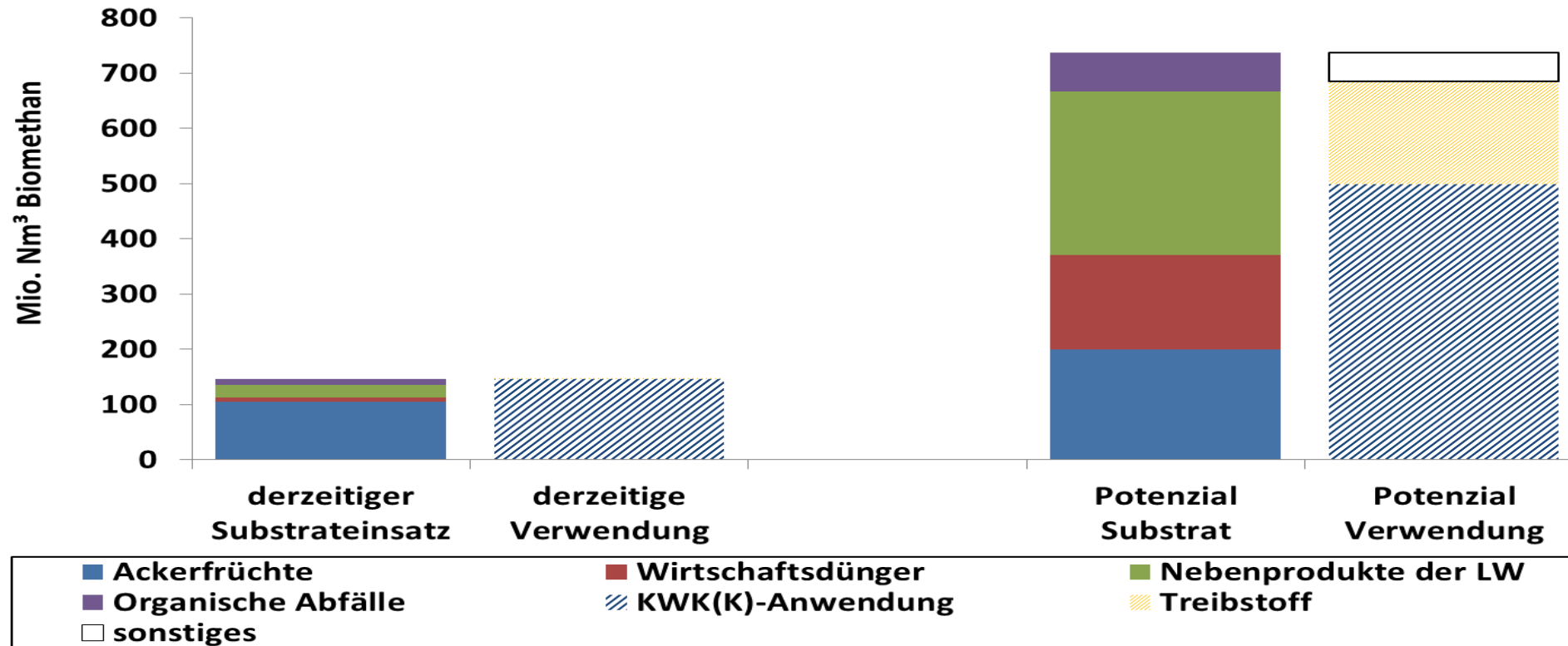


- NAWARO kaskadische Nutzung
- Wirtschaftsdünger
- NAWARO vom Dauergrünland
- Mais
- Ganzpflanzensilagen (exkl. Mais)
- Substrate nach Stoffliste
- biogene Abfälle
- NAWARO vom Ackerland
- Ackerfutterpflanzen - Leguminosen
- sonstige

## Future potential from bio waste , waste from farm land and farm fertilizer

	Current total production [ha]	percentage f Biogas	[kg TS / ha]	[GWh]	Possible applications	
					Mio. Nm <sup>3</sup> CH <sub>4</sub>	MWel. bei 8000 bj
Straw from corn	200 000	30	6 000	900	90	40
Straw from winter rape	53 000	30	4 000	150	15	10
Straw from other cereals	520 000	20	3 500	800	80	40
Catch crops	1.4 Mio.	7	3 500	800	80	40
grassland	570 000	3	5 000	300	30	20
farmfertilizer	20 % von cattle and hogs 40 % des poultry			1 700	170	80
Potential from bio waste				700	70	30
<b>Total potential (non crop based)</b>				<b>5 350</b>	<b>535</b>	<b>260</b>

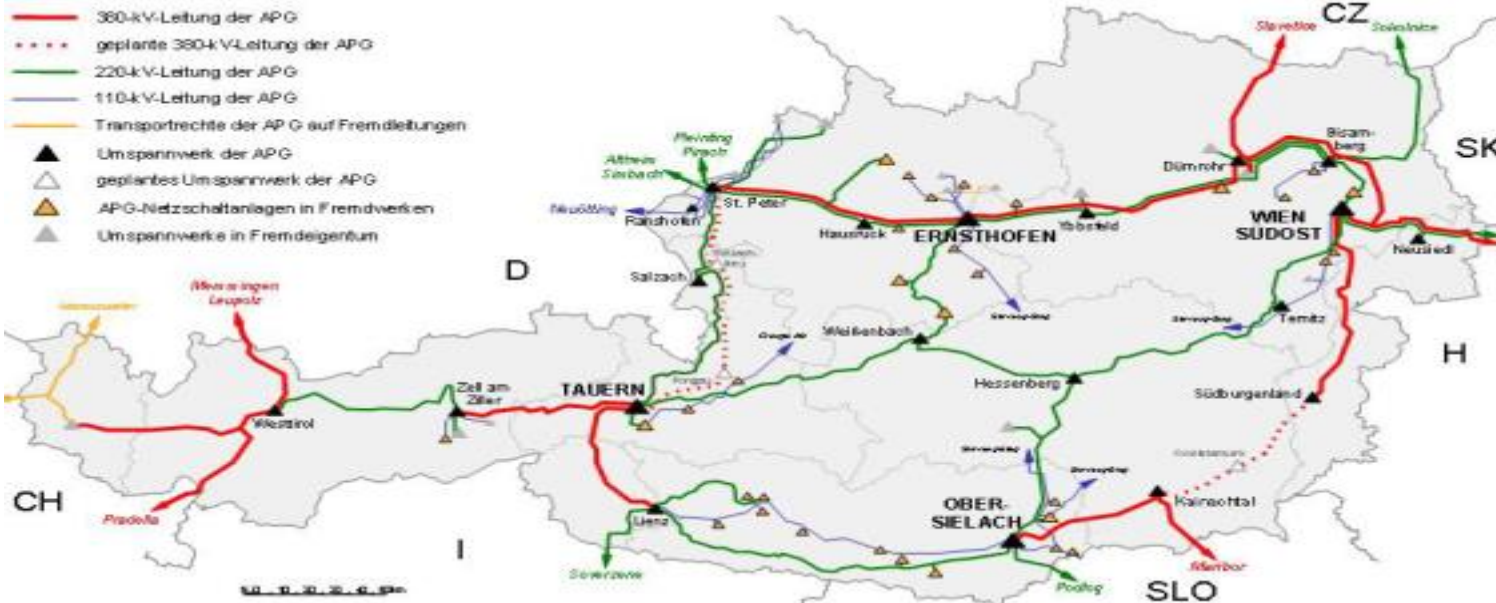
# Currently used feed stock versus potential



Biogas as key technology using the left overs from previous production steps as food, feed or chemistry production and organic waste

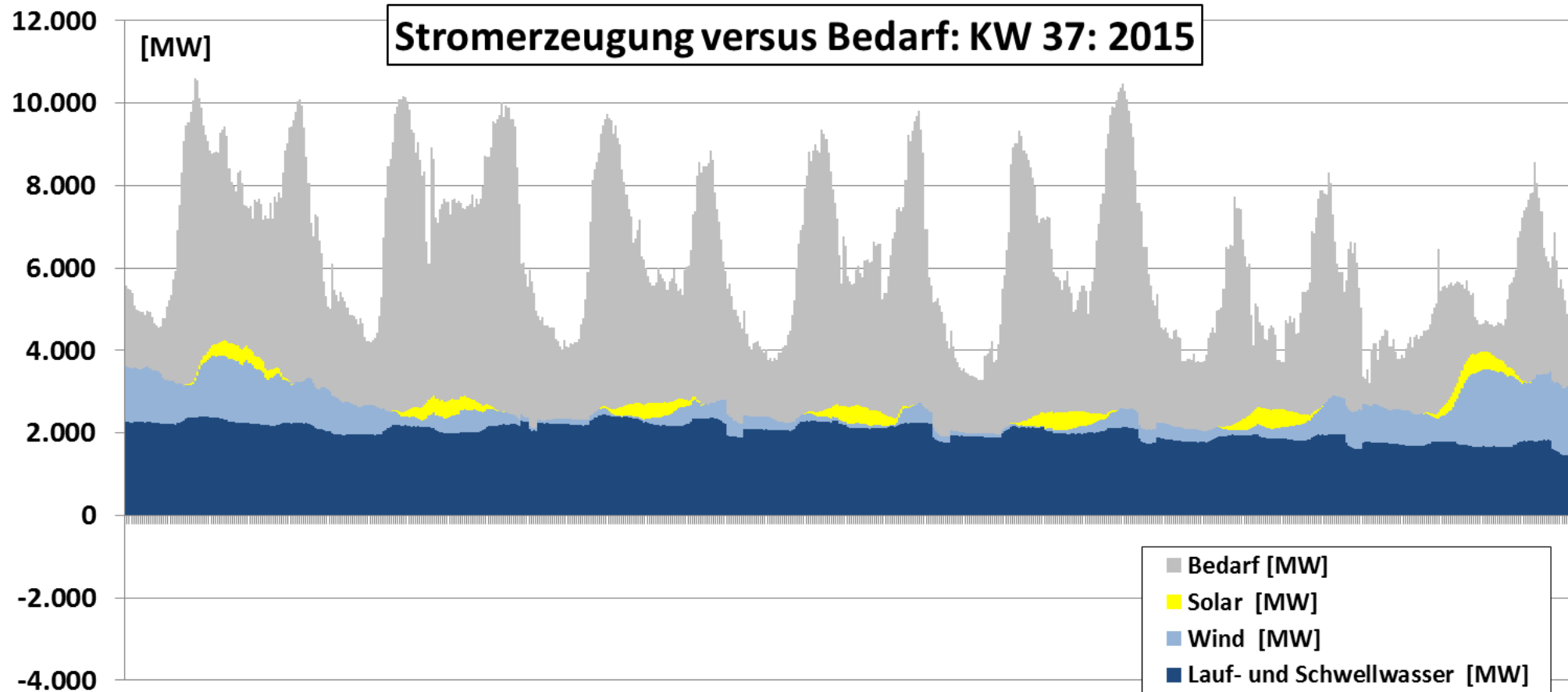


Fortunately we have two very good developed energy grids: Power and gas grid



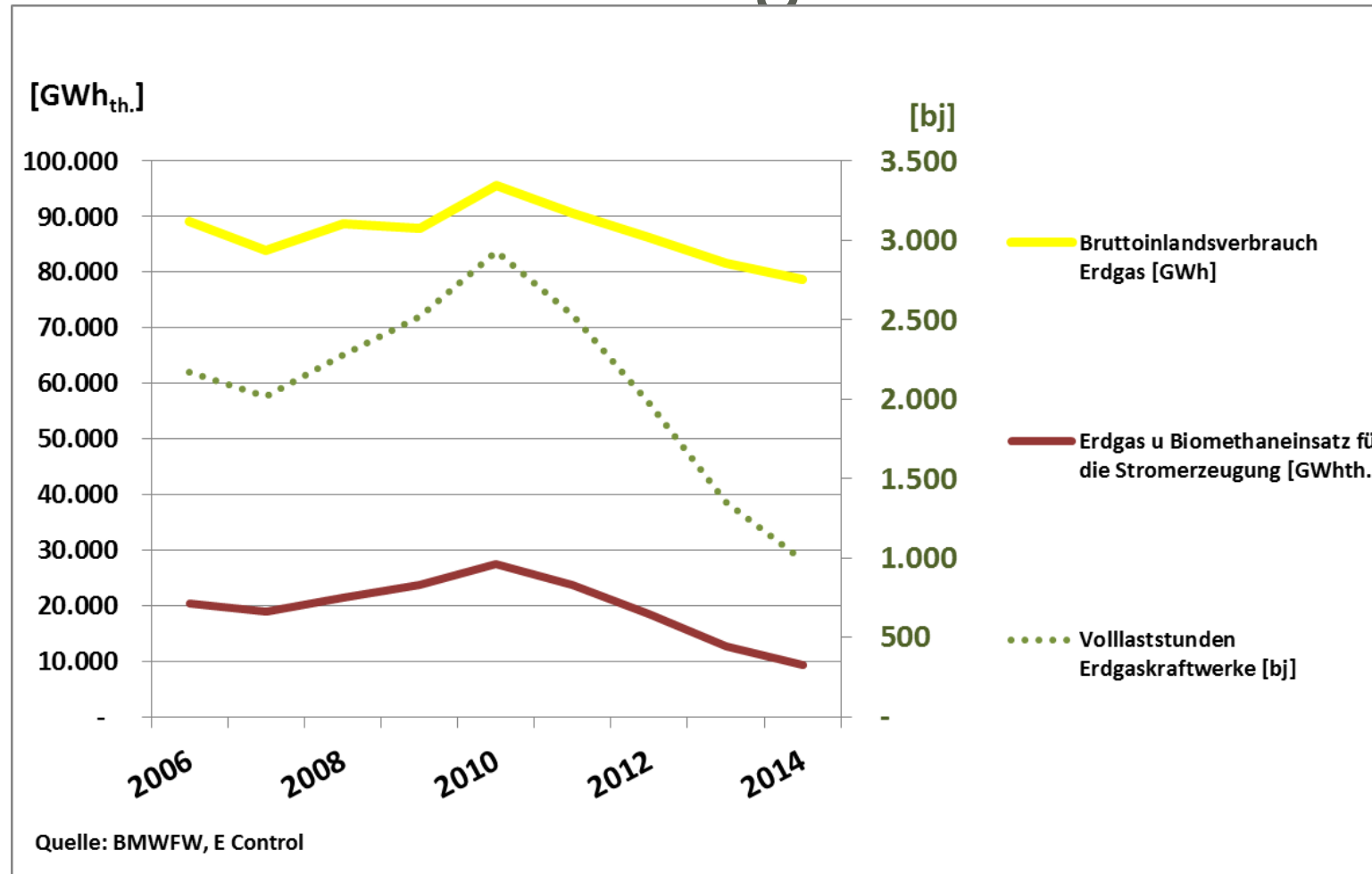
2050 climate and energy targets without involving the gas grid would cause is a great mistake

# Electricity production versus demand



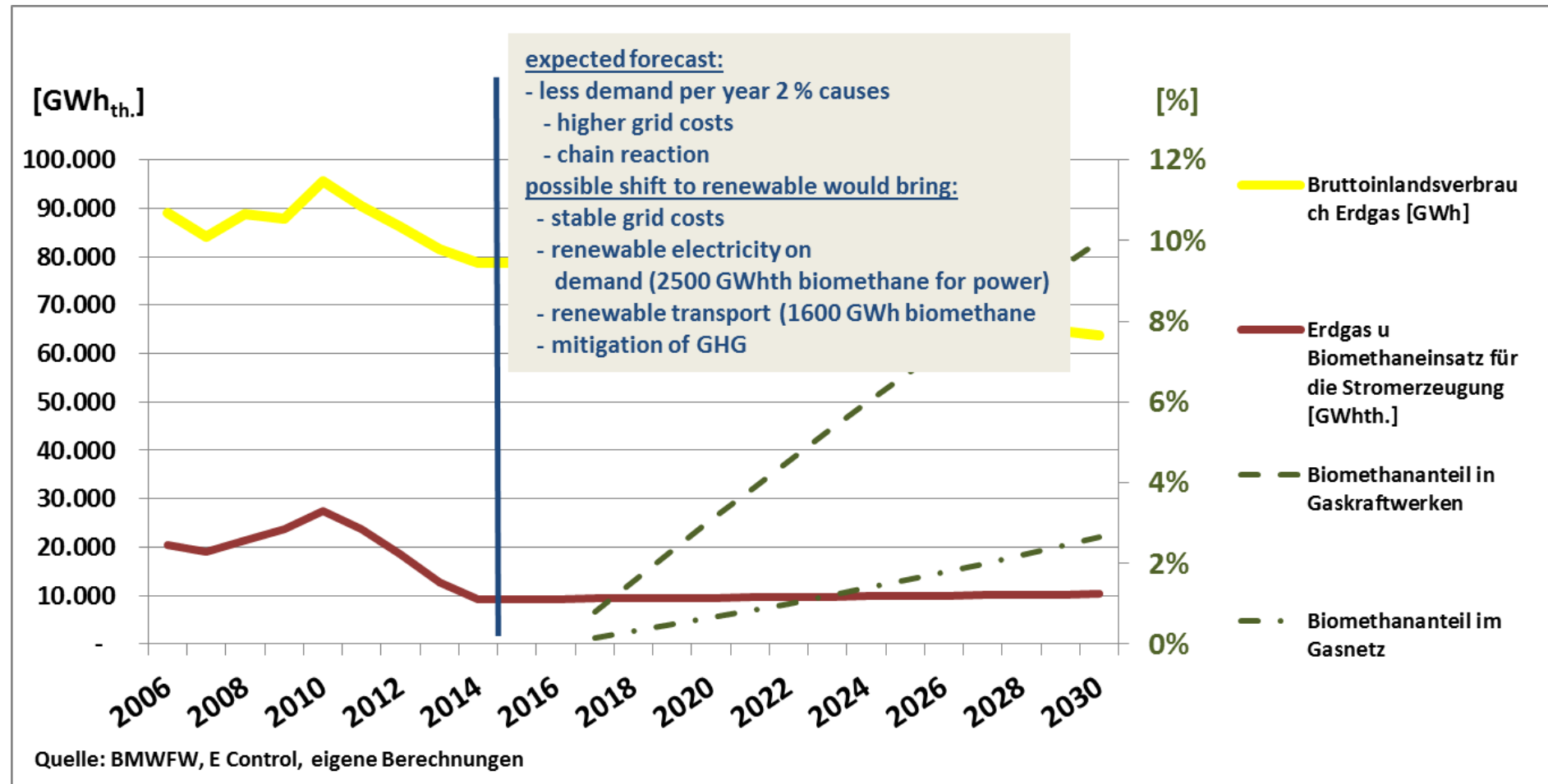


# Demand and electricity application of natural gas





# Possible actions creating a win win situation for the gas grid



# Current situation - Challenges

- Change in used feedstock with a big potential from non food/feed sources
- We expect a further technology jump of the technique
- Current energy situation is not a driver for further development
- Good cooperation between biogas and natural gas stake holders
  - Due to expected development of energy and climate targets 2050 without acting the natural gas grid would be the fastest loser withing fossil fuels
  - ~ 180 methane filling stations
  - ~ 10 000 methane cars „already“ running
- Big lack
  - Political interest
  - Market demand
    - Only a few cities with methane busses
    - Only few lorries
    - CHP after grid injection is at the beginning
- We need an agreement on political level about the future part of the gas grid and biomethane in a 2050 target

# Thank you for your attention!

Austrian Compost & Biogas Association

Franz Kirchmeyr

[kirchmeyr@kompost-biogas.info](mailto:kirchmeyr@kompost-biogas.info)

