Heat Roadmap Europe Workshop on 24.01.19 in Berlin

Kai Lipsius, Head of Essen Green Capital Agency

ESSEN – PRESENTATION / KEY CHARACTERISTICS

City in Germany, North-Rhine-Westfalia

Essen is part of the conurbation Ruhr metropolis with 5.1 million inhabitants

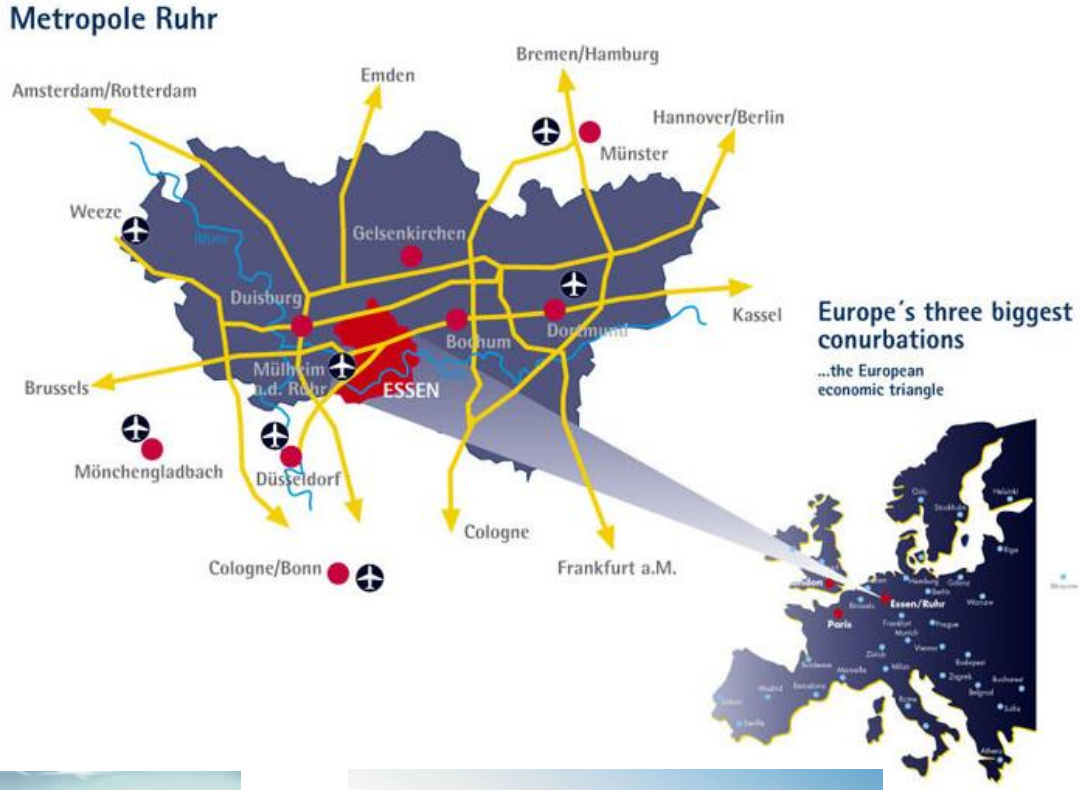
Essen: 591.000 inhabitants

210 km^2

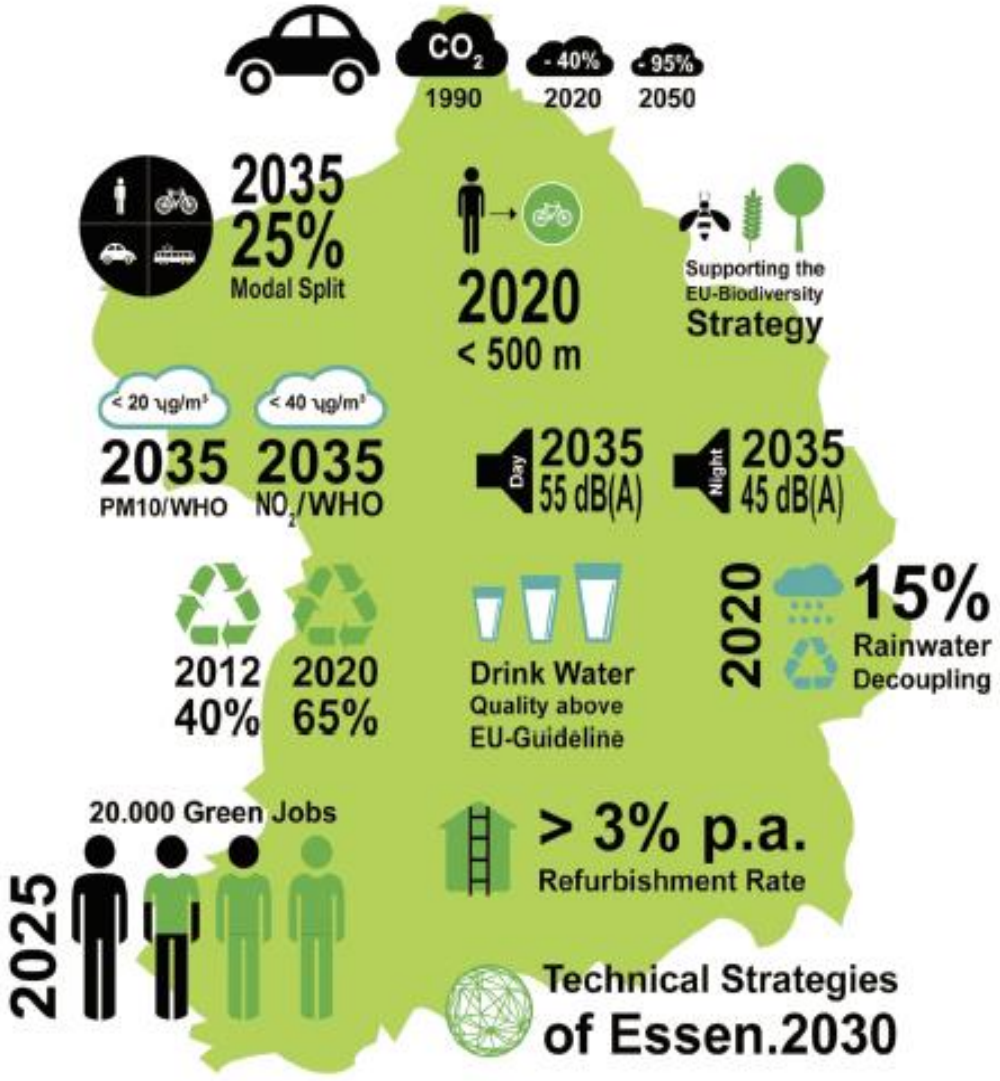
46 % settlement and traffic area

54 % shares of open space

150 years transformation process from rural to coal and steel town to European Green Capital 2017



Targets City of Essen



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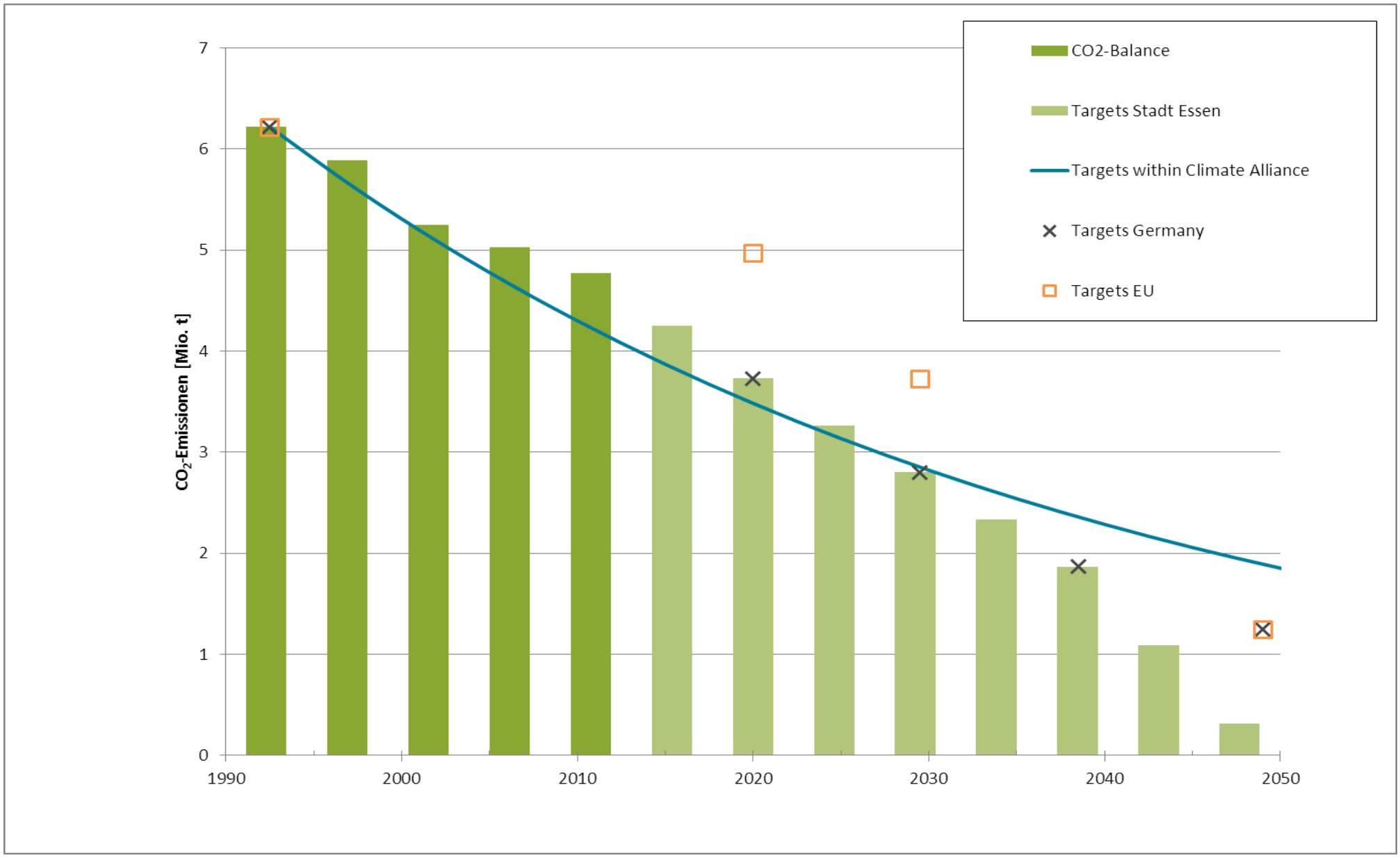
GHG-BALANCE AND TARGETS



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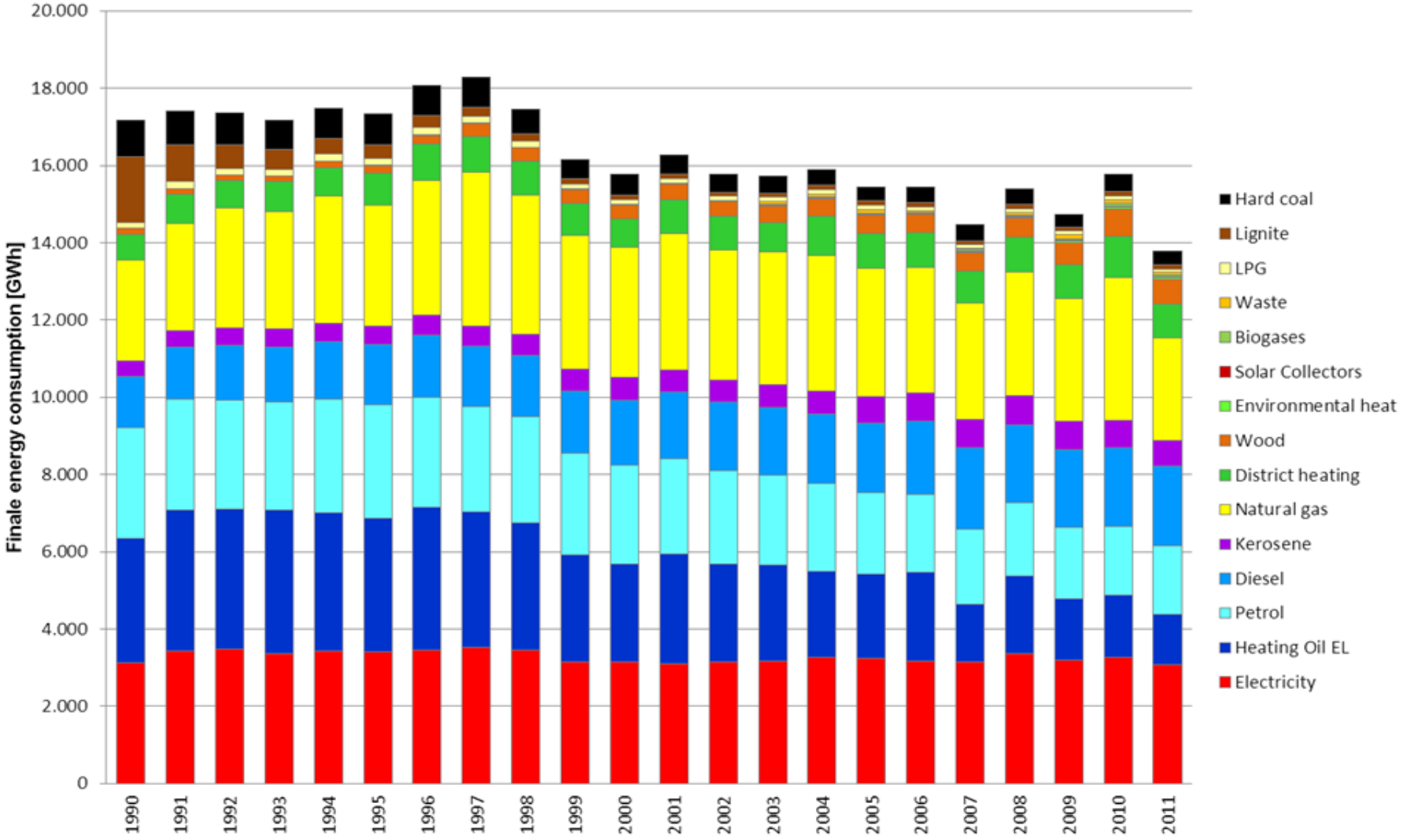
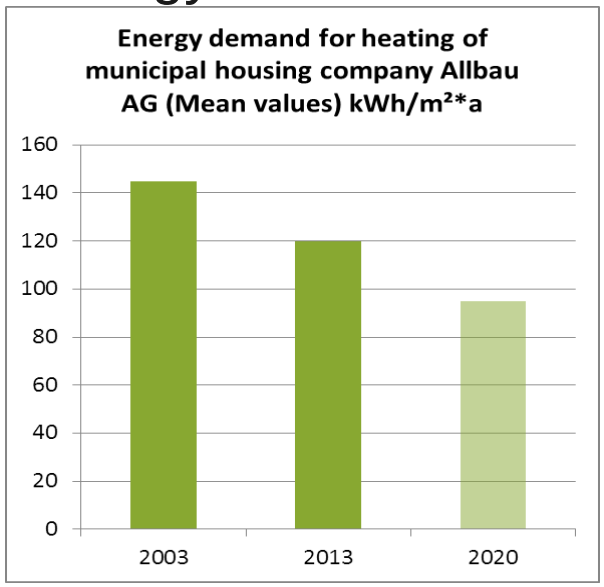
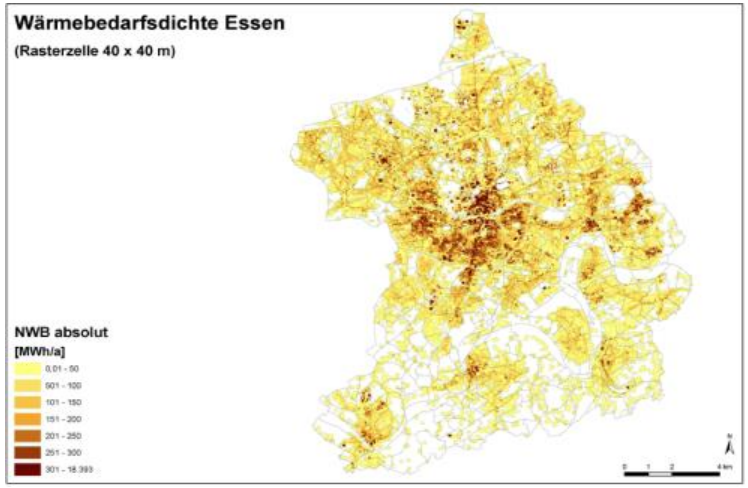
FINAL ENERGY DEMAND



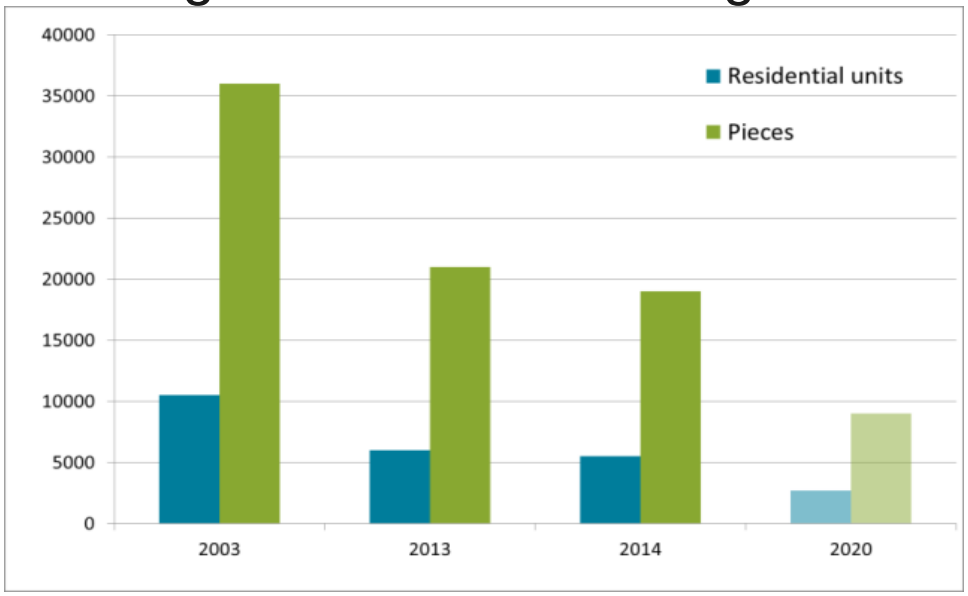
RETRO-FITTING/OFF-PEAK-STORAGE-HEATING/ COGENERATION +DISTRICT HEATING/

Energy Demand Public Housing



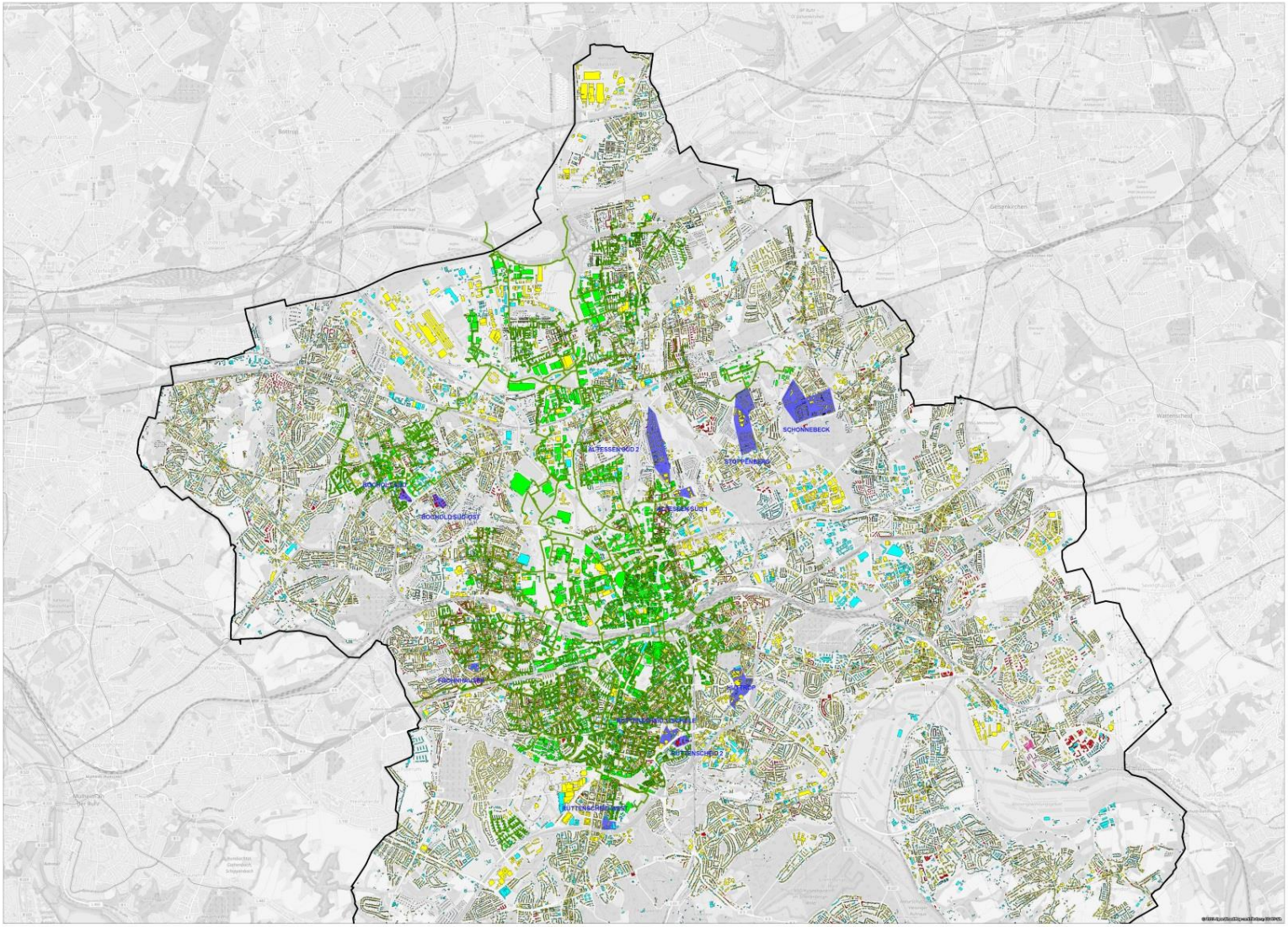


Phasing-out Off-Peak-Storage Heating



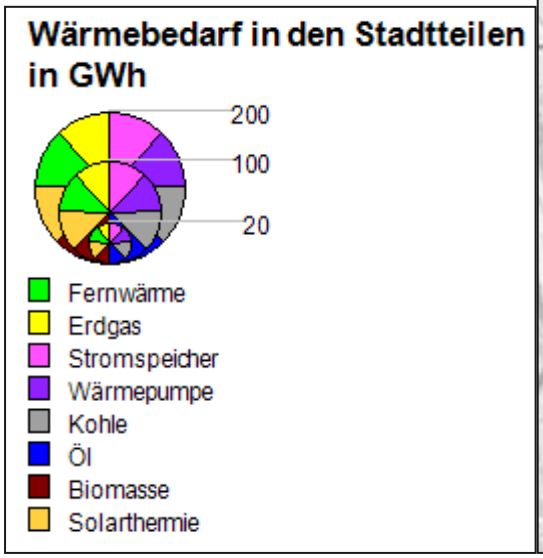
Cogeneration +district heating

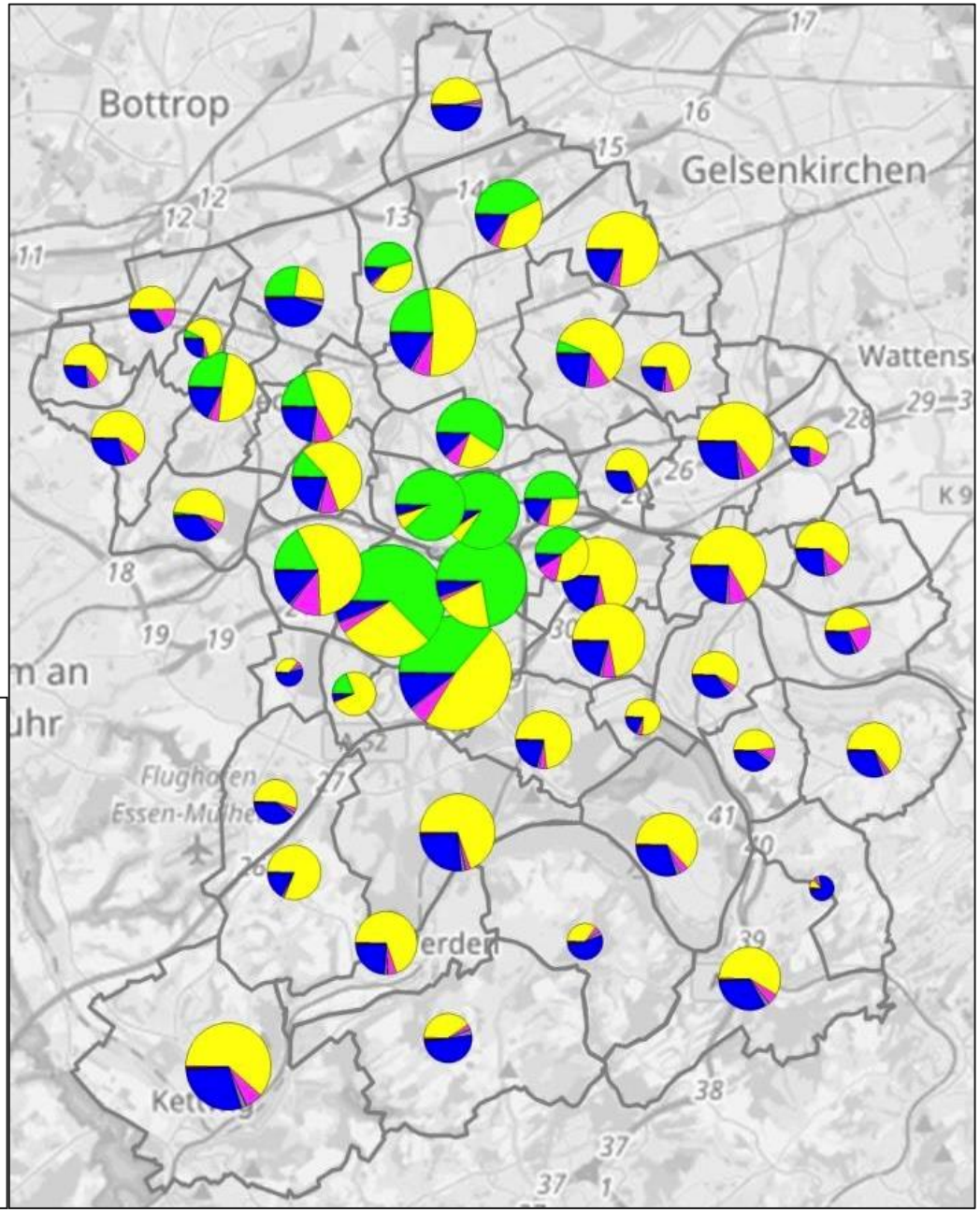
- Heat demand map for Essen



Strategic Planing (Example Energy)

- Collecting and Consolidating data sources (City of Essen, Energy providers, 3D building models)
- Preparing (a temperature-adjusted) Energy atlas as a basis for evaluating potentials
- Scenario calculations
- Action programme



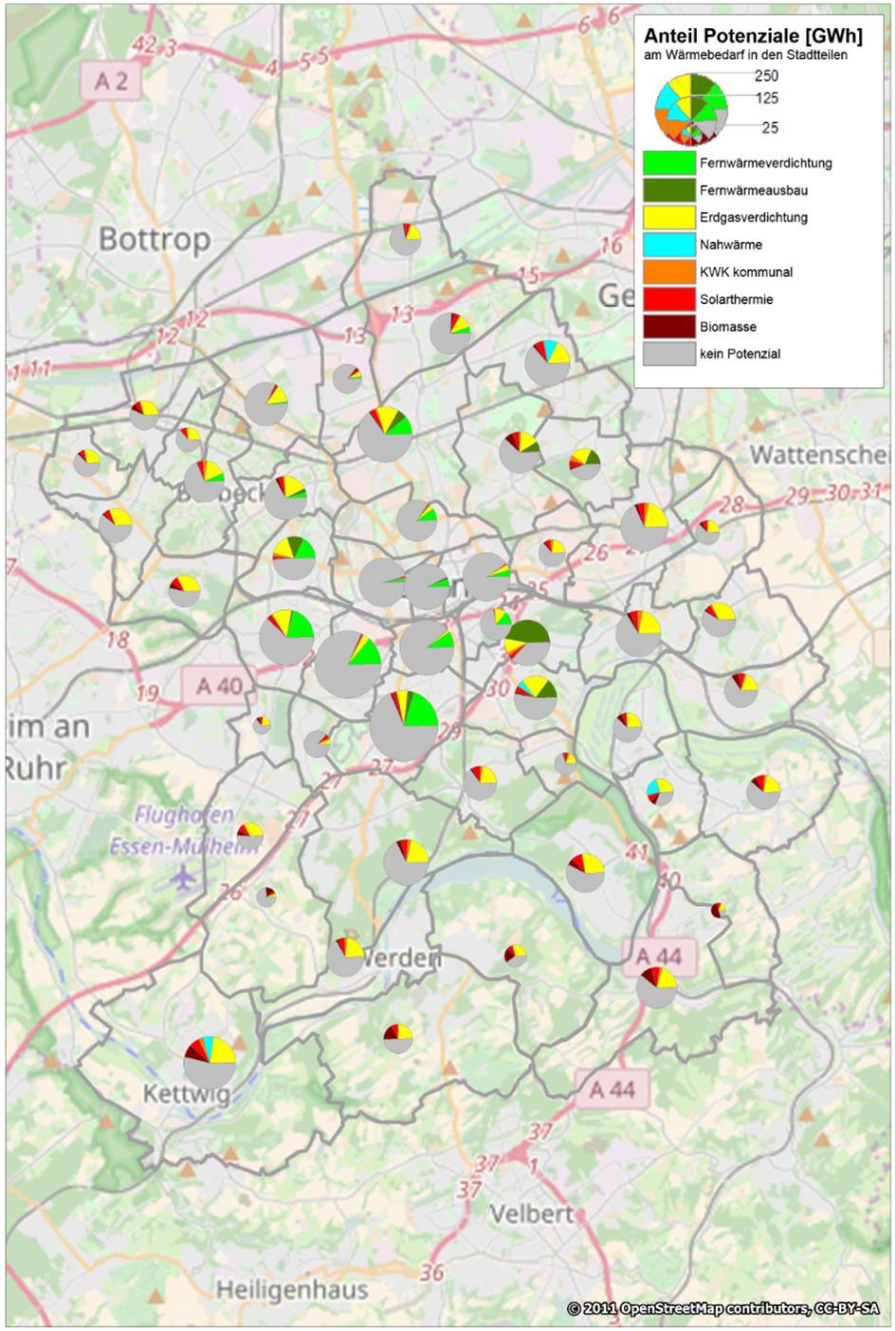


- Potentials for CO_2-reduction

In heating sector Essen

  - City District heating
  - Natrual gas for Storag heating
  - Cogeneration with district heating

	Wärmepotenzial GWh/a	CO_2-Einsparung 1000 t/a
FW-Verdichtung	216	33
FW-Ausbau	124	17
Nahwärme	37	7
KWK kommunal	56	8
Erdgasverdichtung	678	110
Solarthermie	37	11
Biomasse	85	32
Abwärme	30	8
Summe	**1.264**	**225**
Anteil Wärmemarkt	**28,6%**	**17,8%**

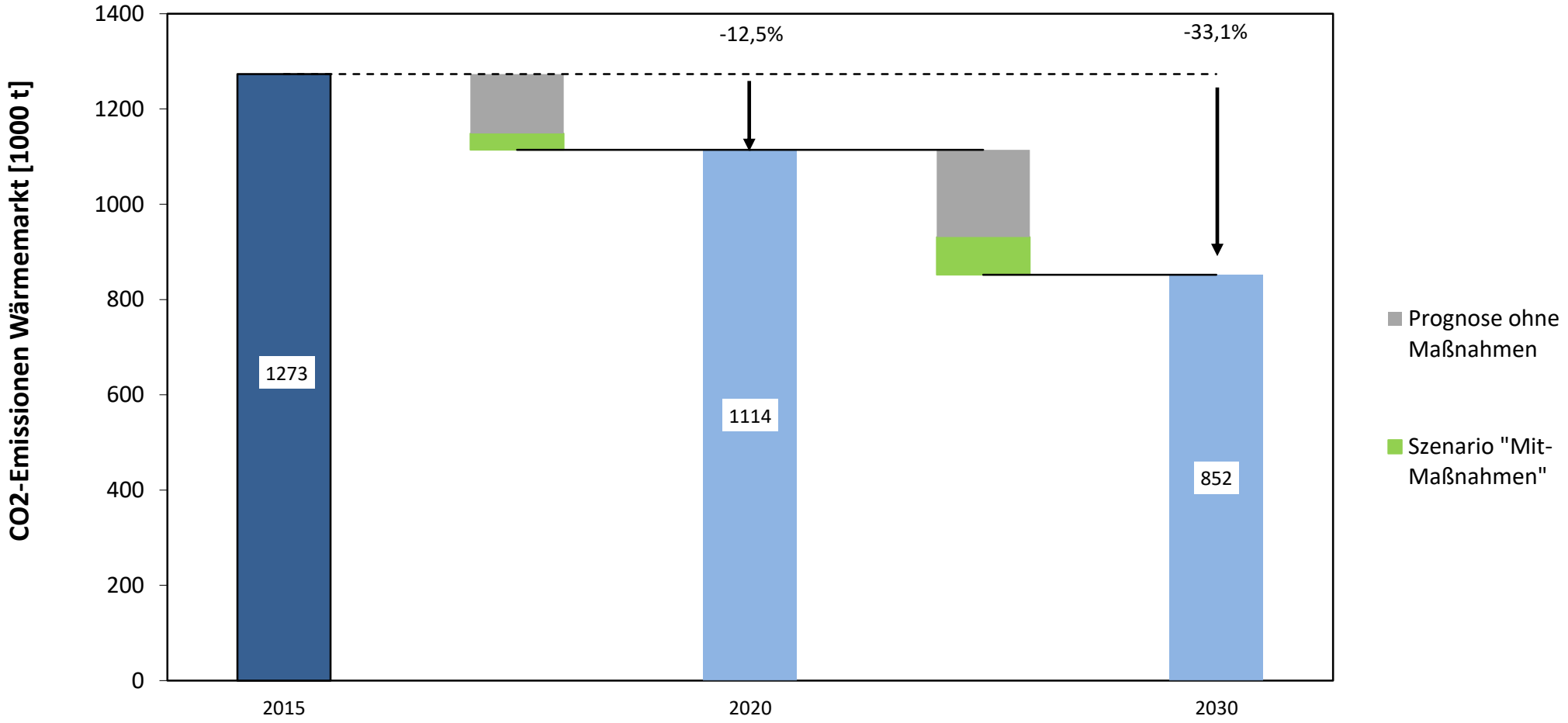


Local Heat

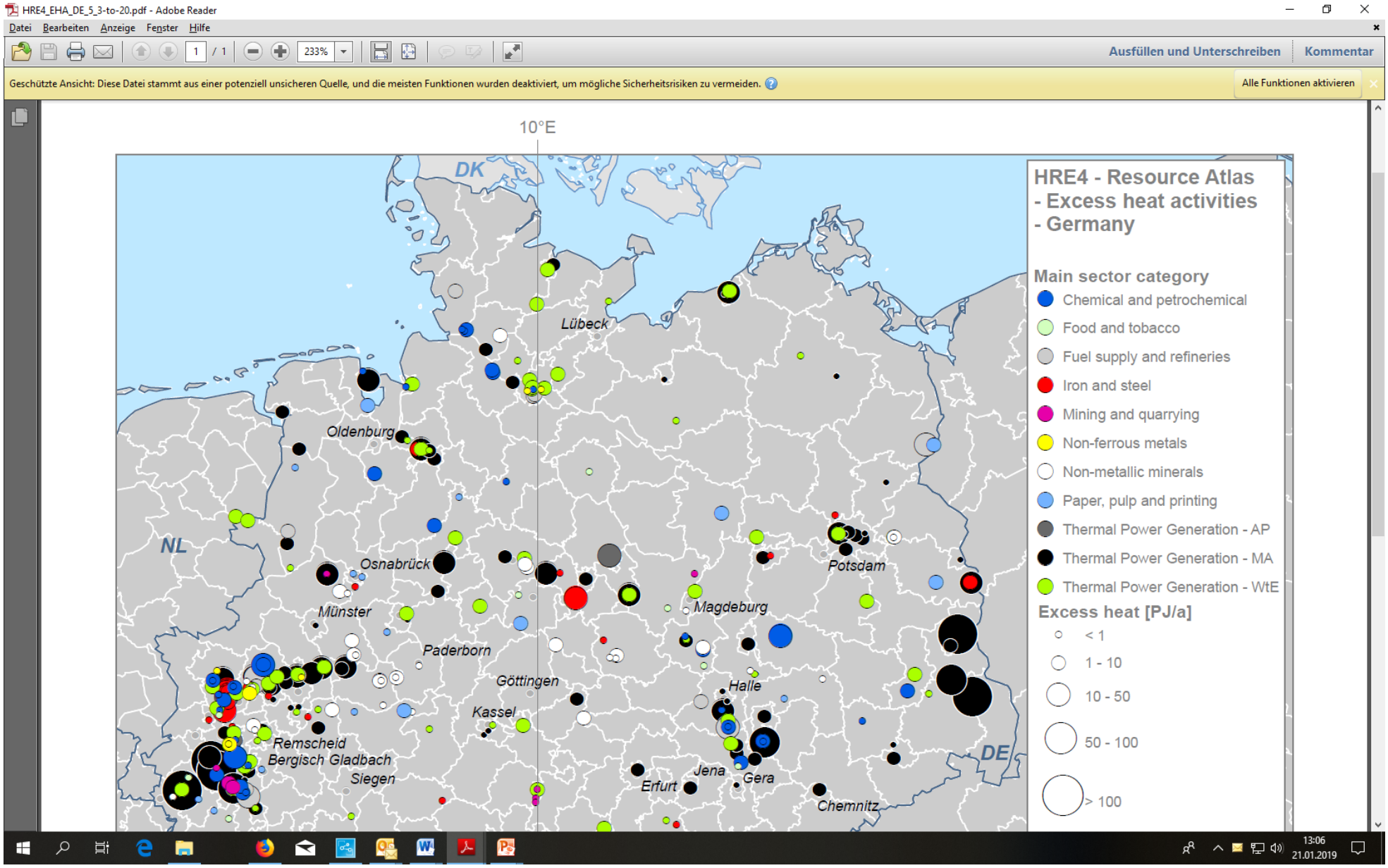
Biomass Heating Station in the “Grugapark“

CO_2-Reduction heating

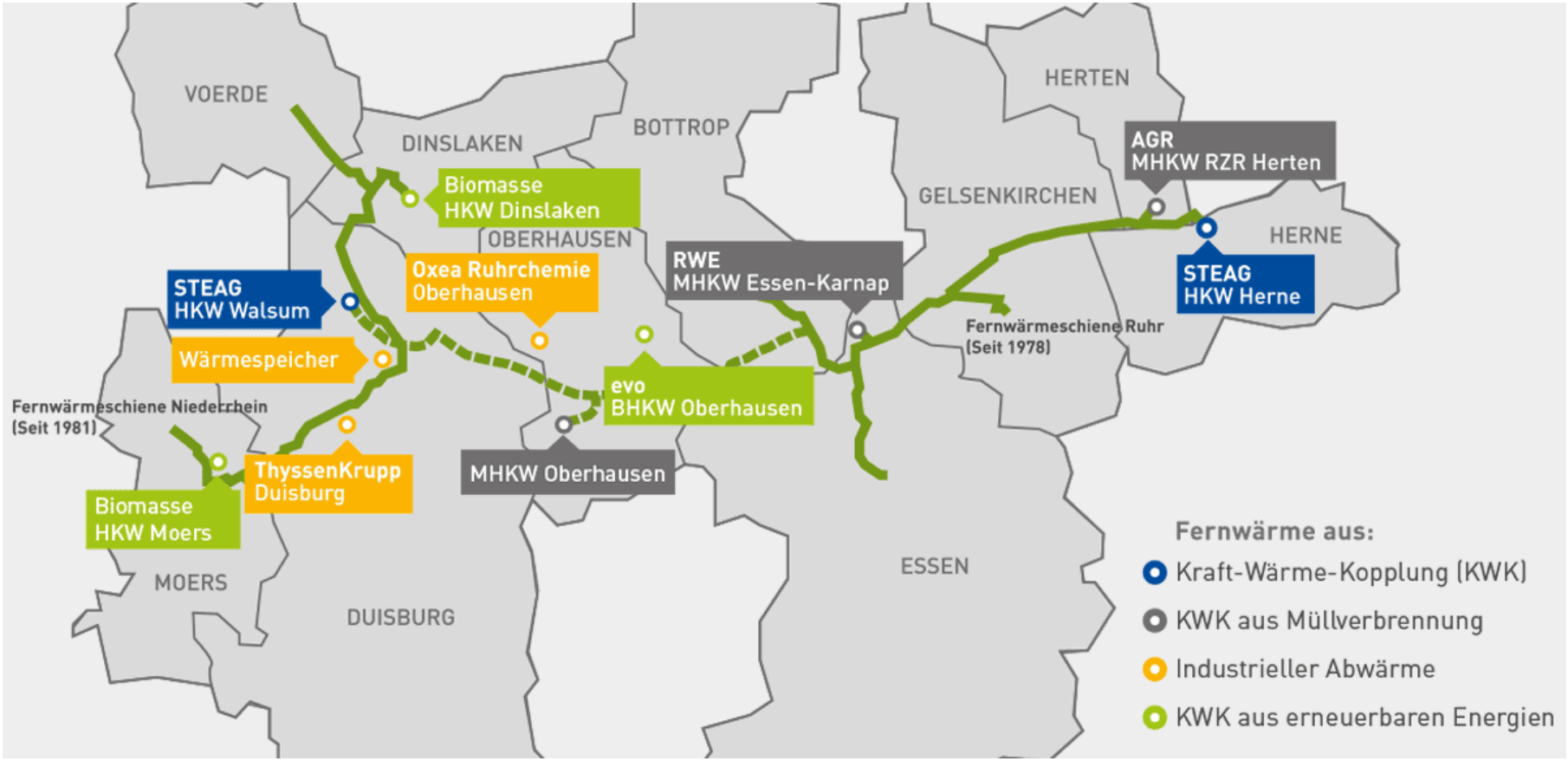
- The experts stated a reduction by a third until (of which a third is due to suggested measures)



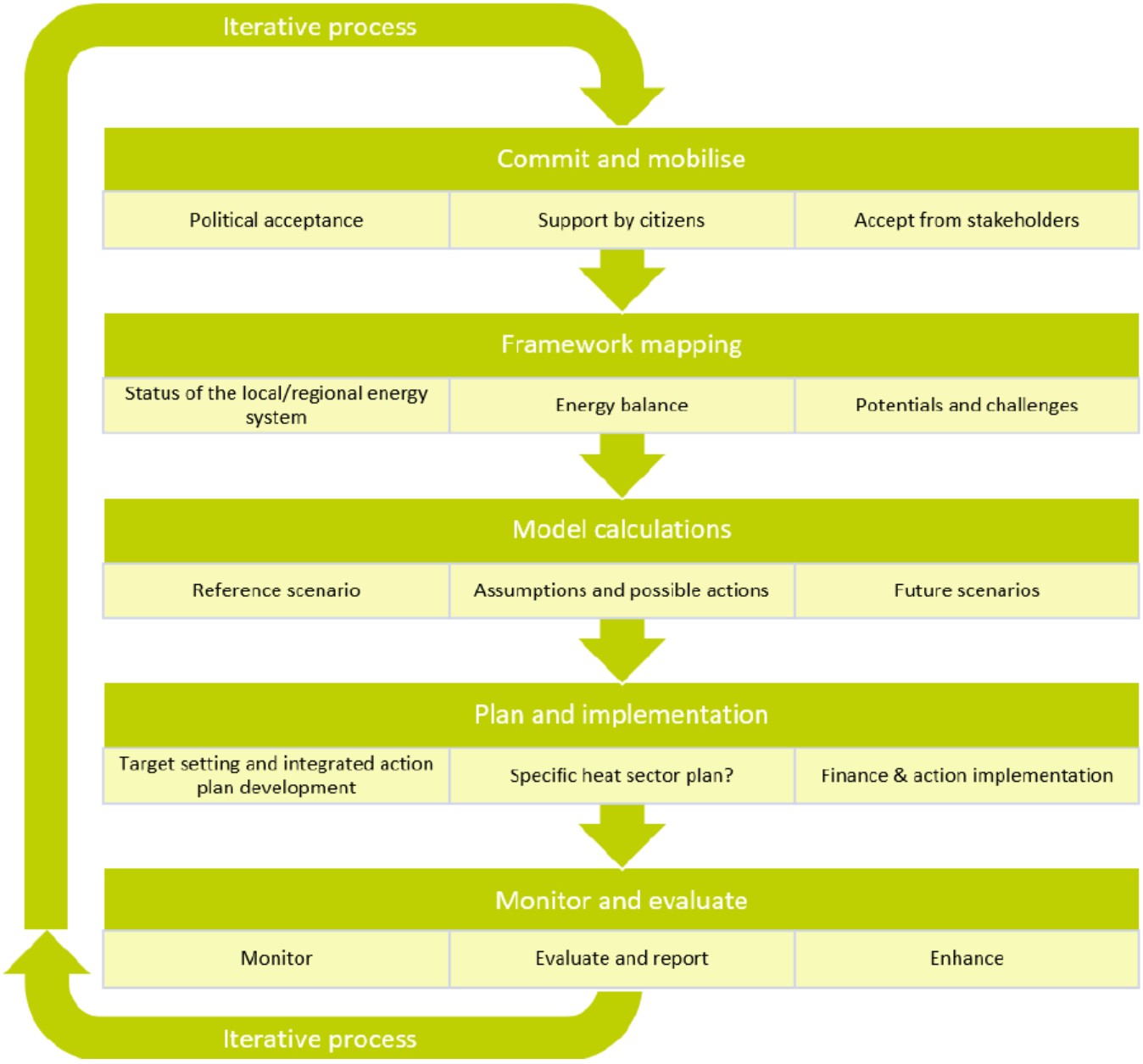
HRE Resources - Excess heat activities :



“Fernwärmeschiene Rhein Ruhr” - Long-distance Heating



Recommendations for Local and Regional Policymakers



Heat Roadmap Germany

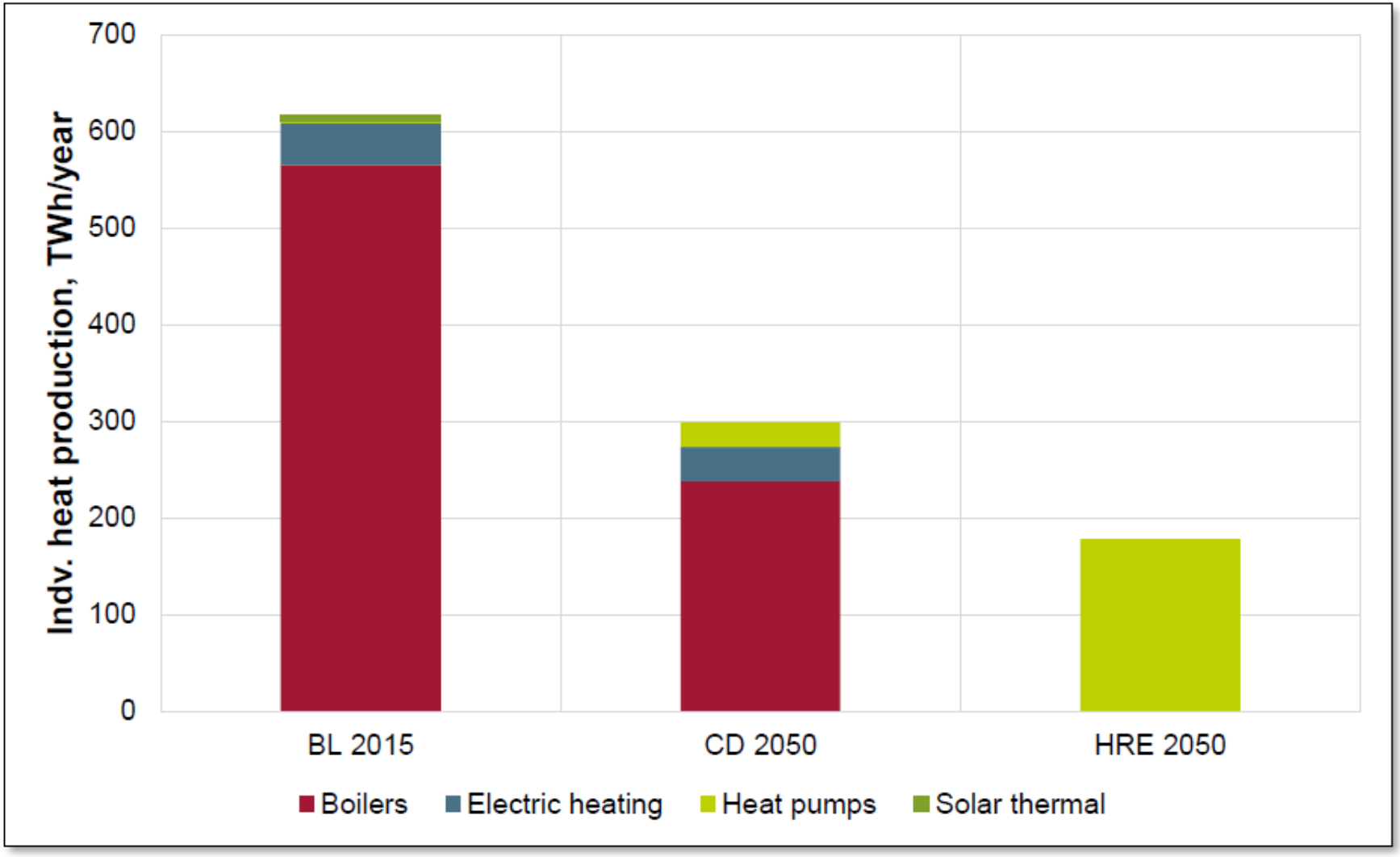


Figure 8. Heat sources for individual heat production in Germany for the three scenarios.

RENEWABLE ENERGIES

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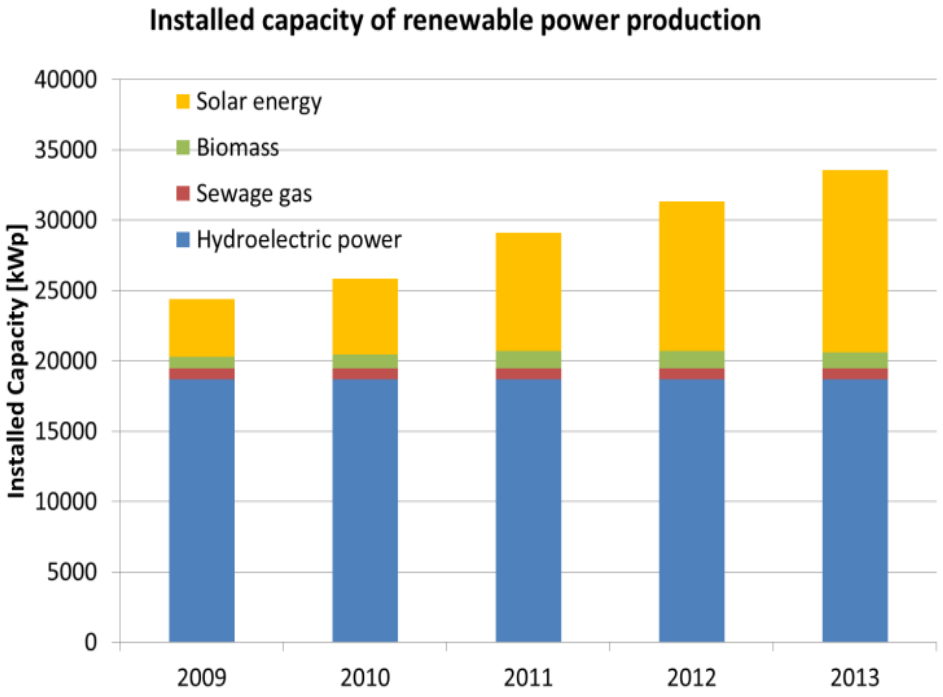
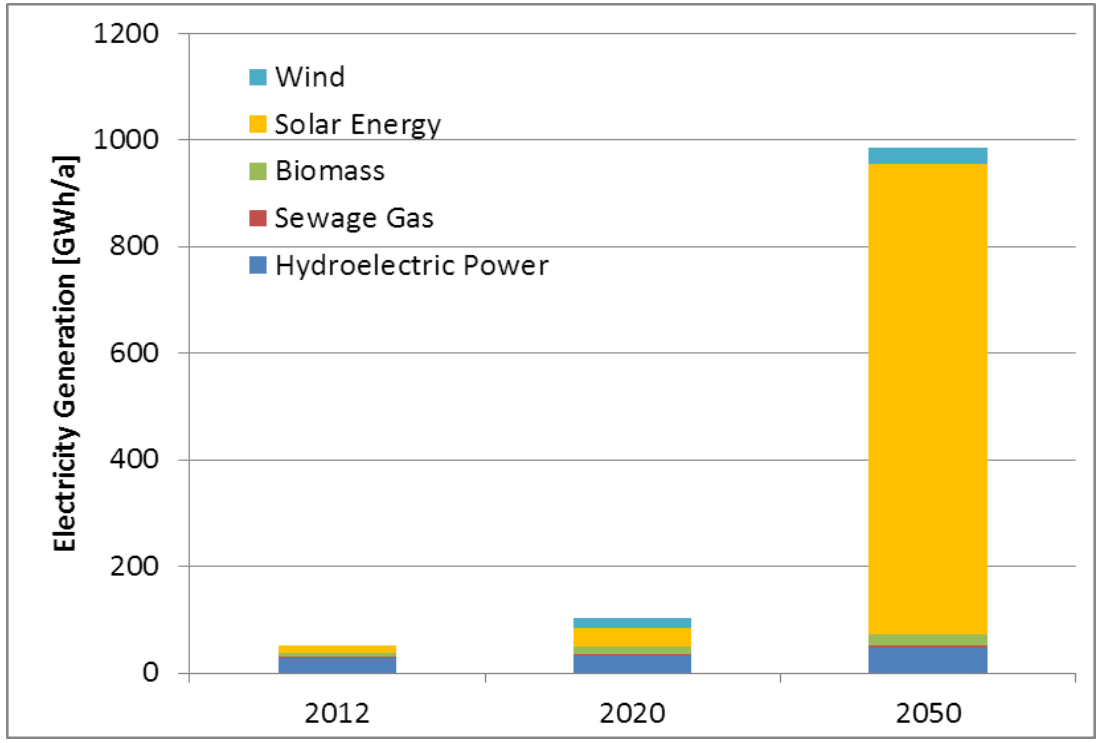
PV auf Schule

Zubau der Photovoltaik



Ziele

Biomasseheizwerk mit Nahwärme



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Thank you for listening