



3rd Round Table

Werner Wessing
Head of Gas Utilisation Competence
Center Gas Technologies
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INTERNATIONAL CONFERENCE
HEAT4U PROJECT January 26th, 2012

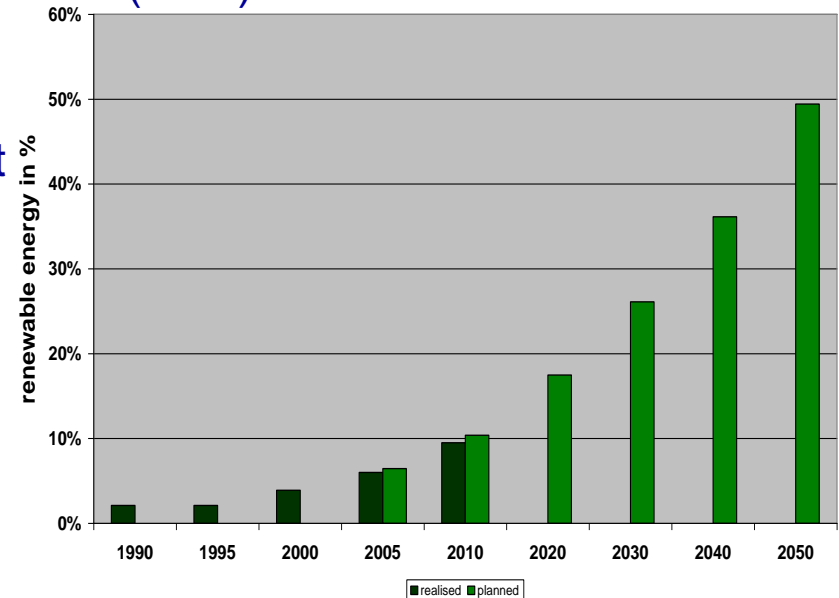
Gas Absorption Heat Pump solution
for existing residential buildings

Framework and political requirements

Goals of the German government for the heat market in 2020 (2030):

- Reducing the CO₂-emissions by 40% (55%) compared to 1990
- Reducing the heat demand by 20% (30%) compared to 2008
- **Share of renewable energy of 18% (27%)**

The realization will have a strong influence on the future development of the gas market.



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Gas Heat Pumps – an important contribution to the future heating market

Werner Wessing – E.ON

Framework and political requirements

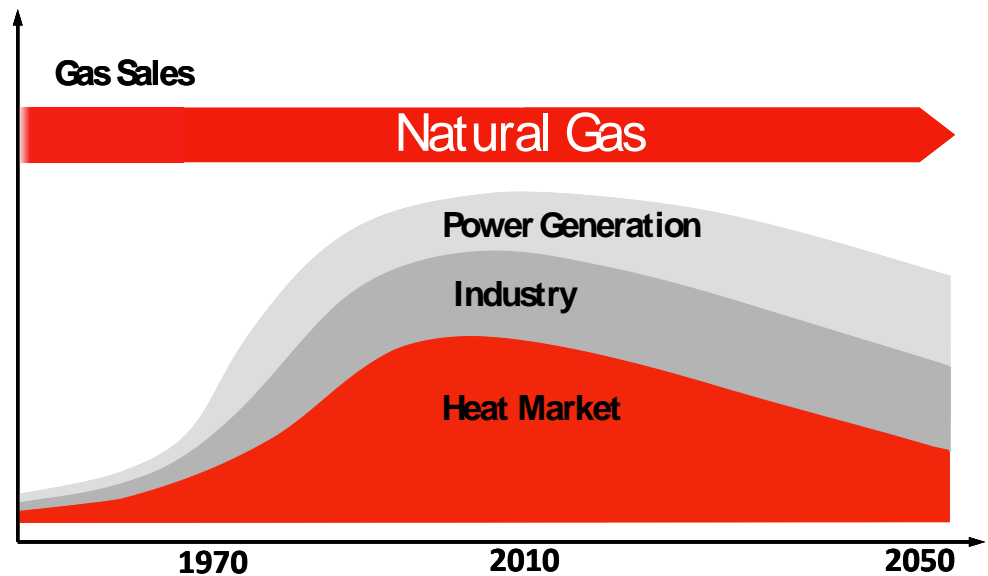
E.ON Ruhrgas supports the governmental goals and develops the gas market by supporting the development

Gas market

- of Biogas injection
- of hydrogen injection

Technology for heating

- Solar thermal energy plus
- condensing boilers
- **Gas Heat Pumps**
- cogeneration technologies
- ...



The influence of existing buildings on the heat market

634 TWh



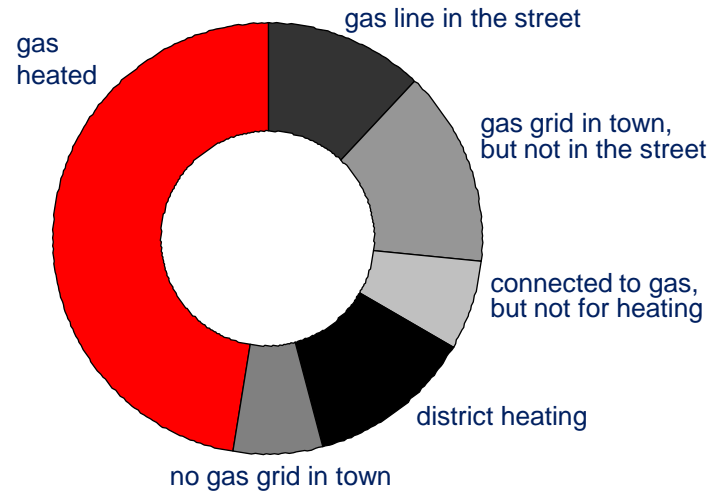
511 TWh

Accumulated heating demand of new buildings until 2030: only 5%!

2008

2030

Flats with...	
gas heating	18,0 M
gas line in the street	4,5 M
gas grid in town, but not in the street	5,5 M
connected to gas, but not for heating	2,6 M
district heating	4,7 M
no gas grid in town	2,5 M
sum	37,8 M



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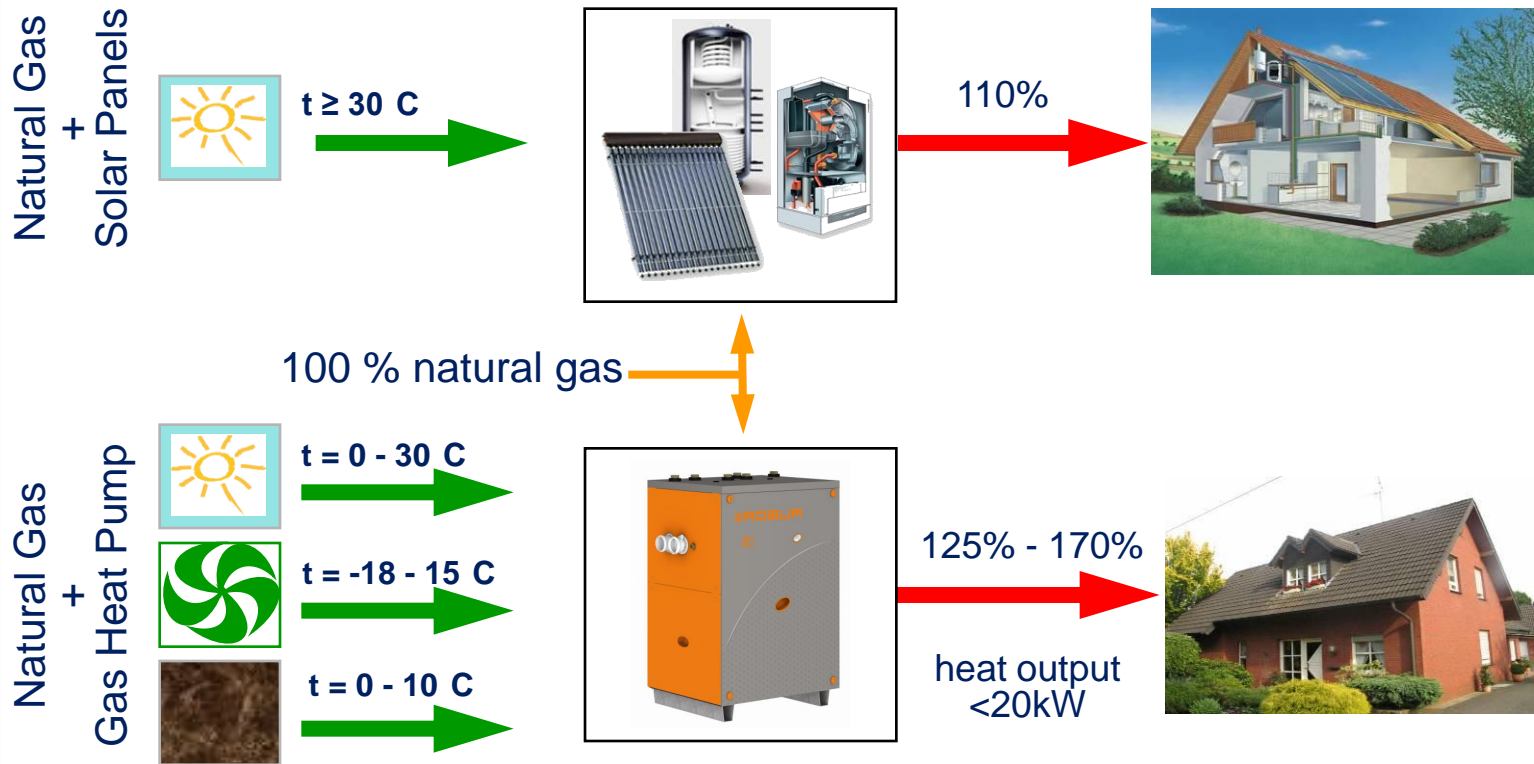
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Hauanschlüsse 18.09.2008 VGMA/Paul

Gas Heat Pumps – an important contribution to the future heating market

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Natural gas and renewable heat



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GHP appliances in Germany

since June 2011
(10kW)



Vaillant

from spring 2013
(10kW)



Viessmann

since spring
2009 (40kW)



Robur

since autumn
2011 (40kW)



Bosch Thermotechnik

Adsorption Heat Pumps with solar panels (Vaillant) or ground spikes (Viessmann)

Absorption Heat Pumps with ground spikes (Robur) or air (Bosch Thermotechnik and Robur)

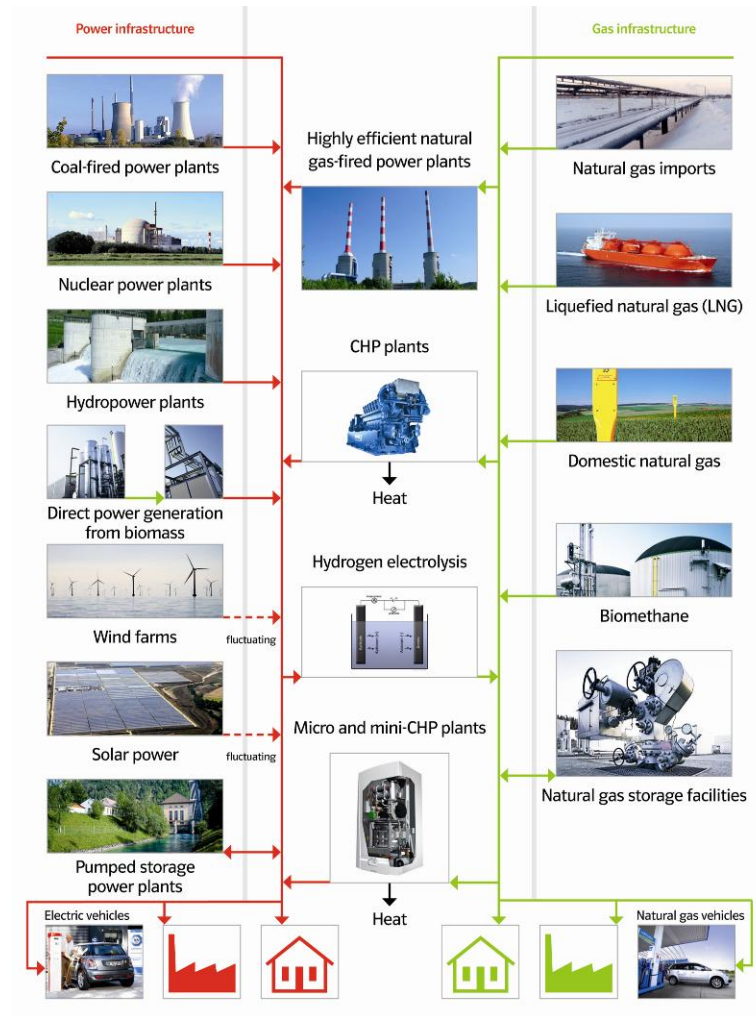
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Convergence of power and gas grids



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Closure

Benito Guerra
President
Robur

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HEAT4U Project
Coordinator



HEAT4U Project
Partner



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January 26th, 2012
Congress Centre "Palazzo delle Stelline"
Corso Magenta 61, Milan



Under the EU's Seventh Framework Programme for Research

