



Hamburg's Heat Policy in Transition

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Outline

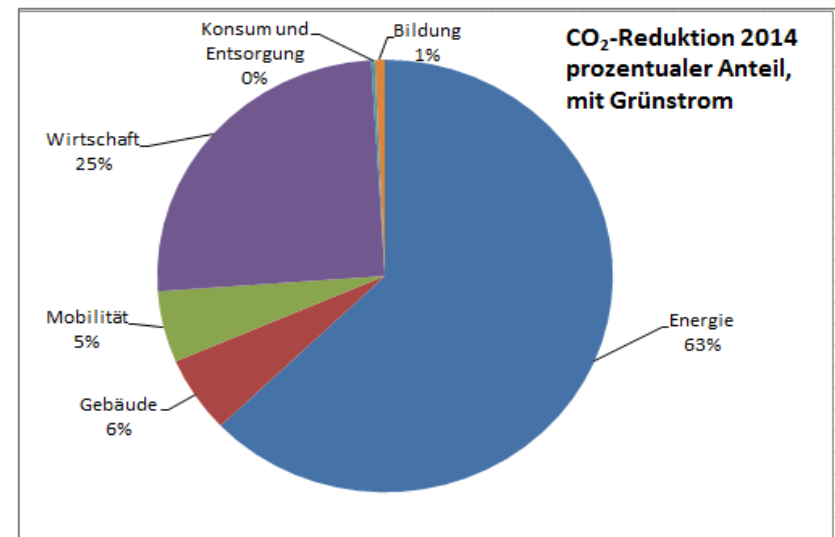
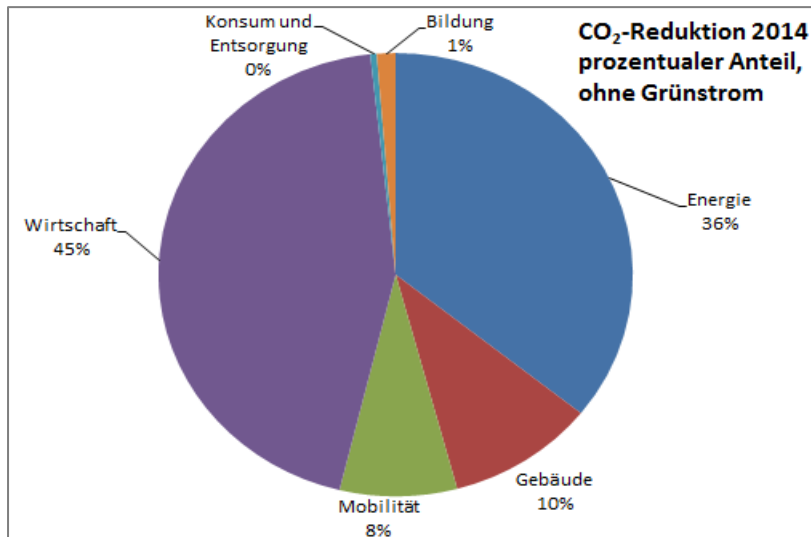


- Overview over heat sources and networks
- Different approaches to ownership and governance
- Lessons learnt

Climate policy goals and emissions in 2014

<u>Timeline</u>	<u>Mitigation goals</u>
2020	Hamburg contributes to the national goals: 40% CO ₂ -reduction (= 1,81 Mio tons)
2030	50% CO ₂ -reduction
2050	Climate-friendly city: At least 80 % CO ₂ -reduction

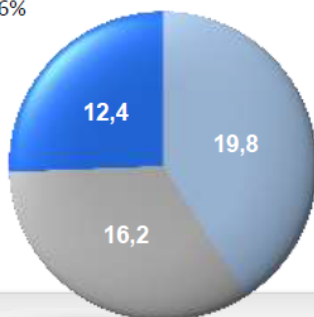
Source: FHH (2015)



Energy consumption in Hamburg 2013

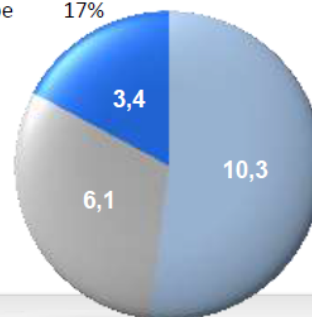
**Endenergieverbrauch
Hamburg 2013 in TWh**

Wärme	41%
Verkehr	33%
Strom	26%



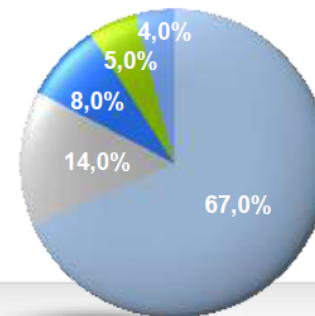
**Anteile Wärmeverbraucher
2013 in TWh**

Haushalte	52%
Gewerbe, Dienstleist.	31%
Verarb. Gewerbe	17%



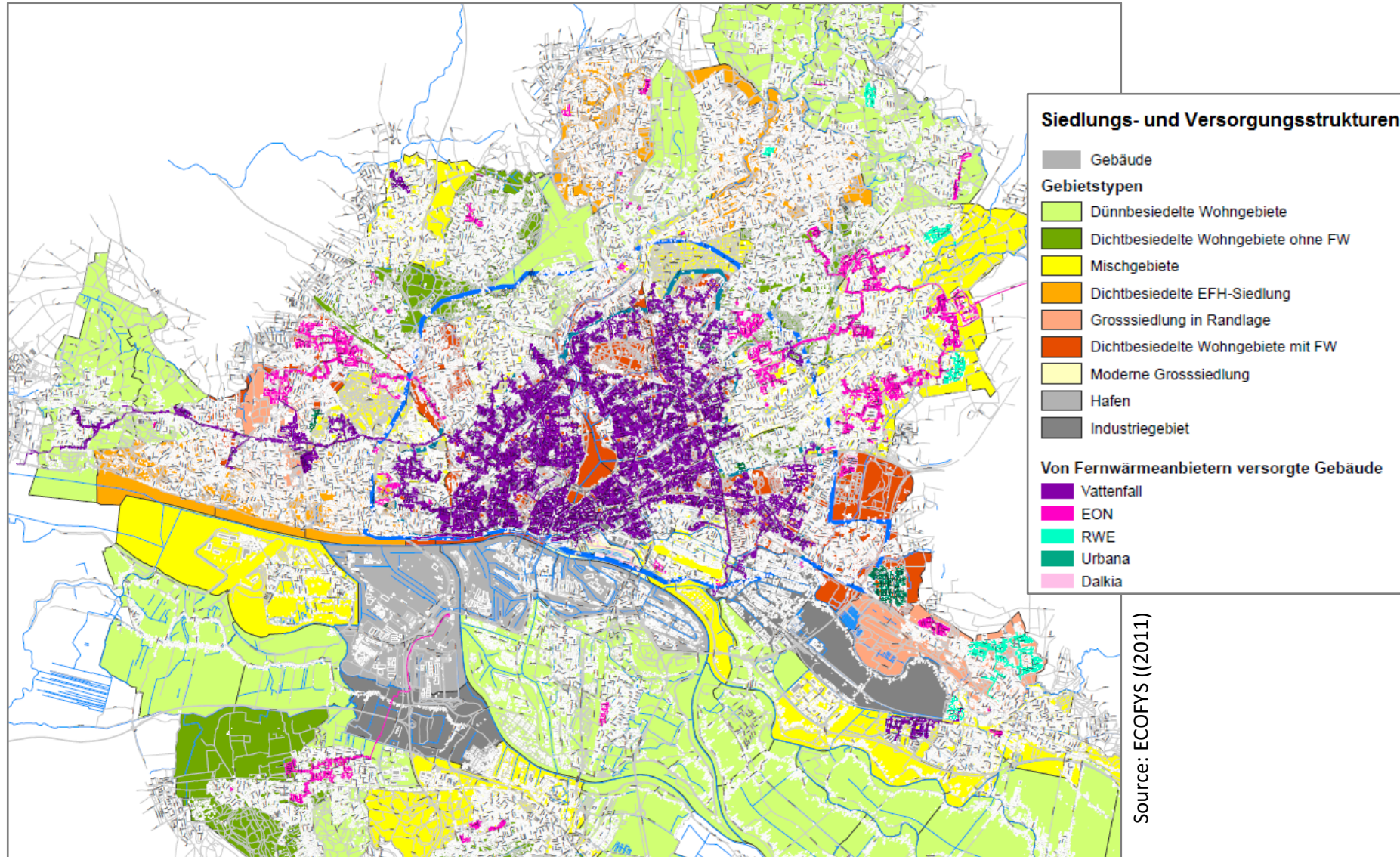
**Anteile der Energieträger
Wärme 2013 in Prozent**

Erdgas	67,0%
Mineralöle	14,0%
Kohle	8,0%
EE, inkl. Biomüll	5,0%
Müll, fossil	4,0%

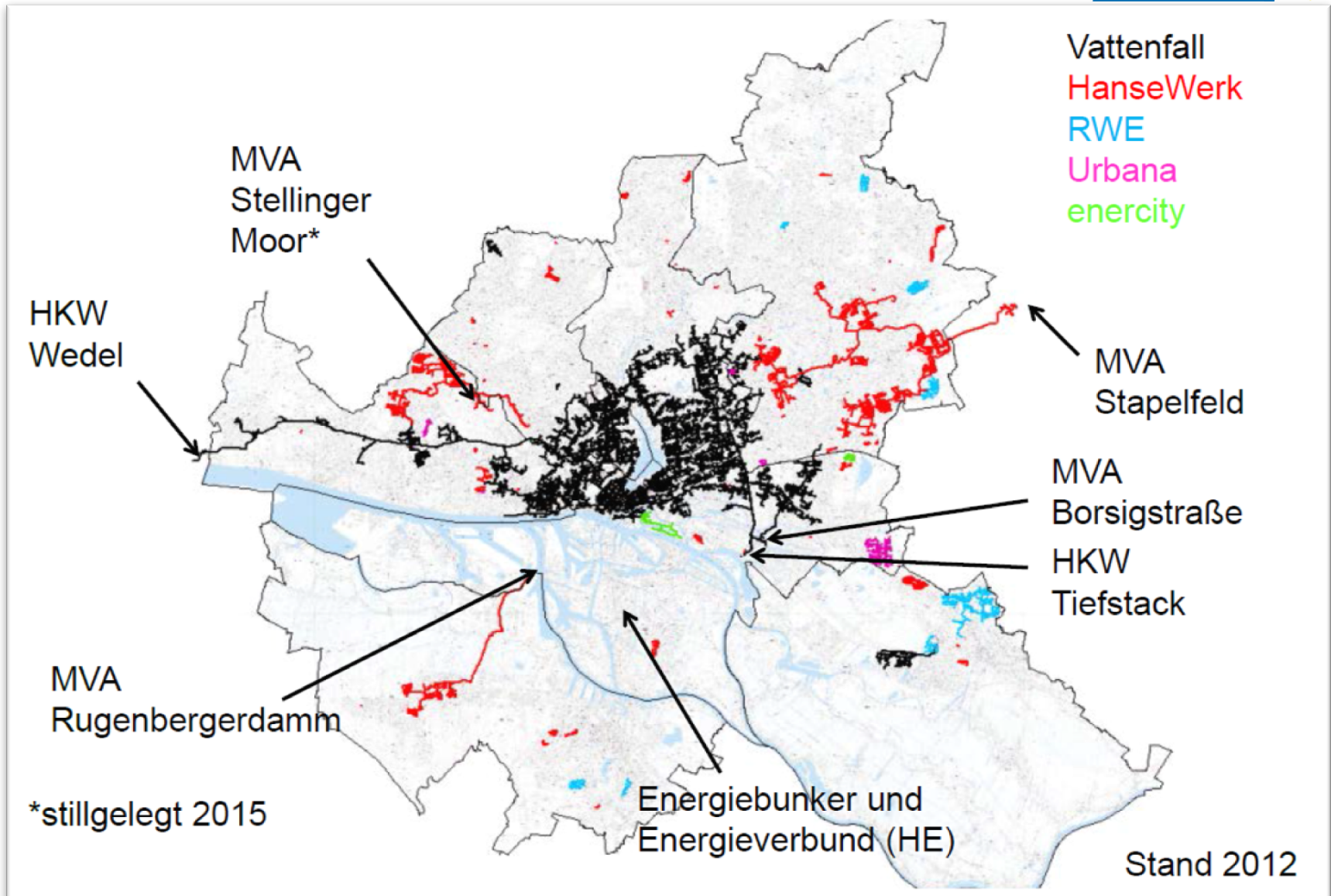


Source: FHH (2016)

Settlement structures and heat networks



Heat networks and production capacities



A history of re-municipalisation

2011: City acquires 25,1% of shares
of Vattenfall Heat Hamburg

1990 Sale of Hamburg
Electric Power to Vattenfall

2009 Foundation of
Hamburg Energy



2015 New government under
social-democrat/green coalition

2011 Public initiative
„Unser Hamburg unser Netz“

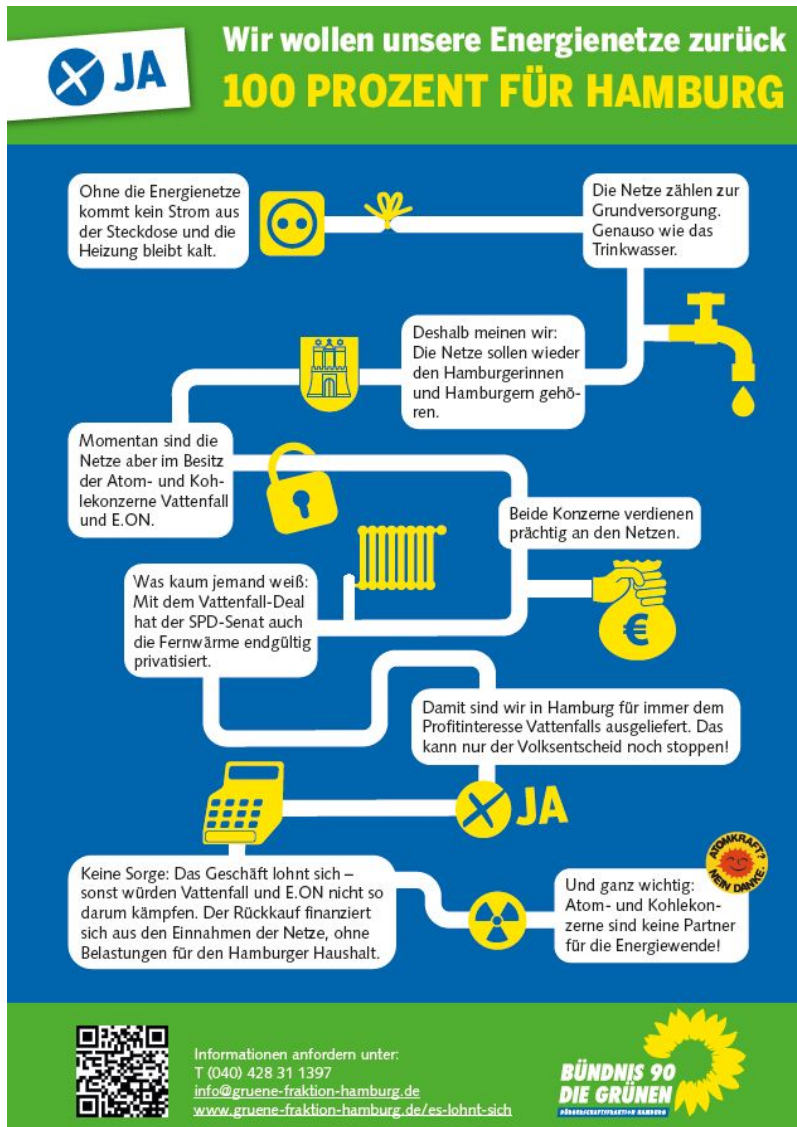


2013 Referendum on the re-
acquisition of power, gas and
heat networks

2014 Stakeholder process on
alternatives to power plant
Wedel, initiated through
parliamentary mandate

2015 Parliamentary mandate
to establish the Energy Network
Council

Referendum on the re-acquisition of networks



Claims of the initiators:

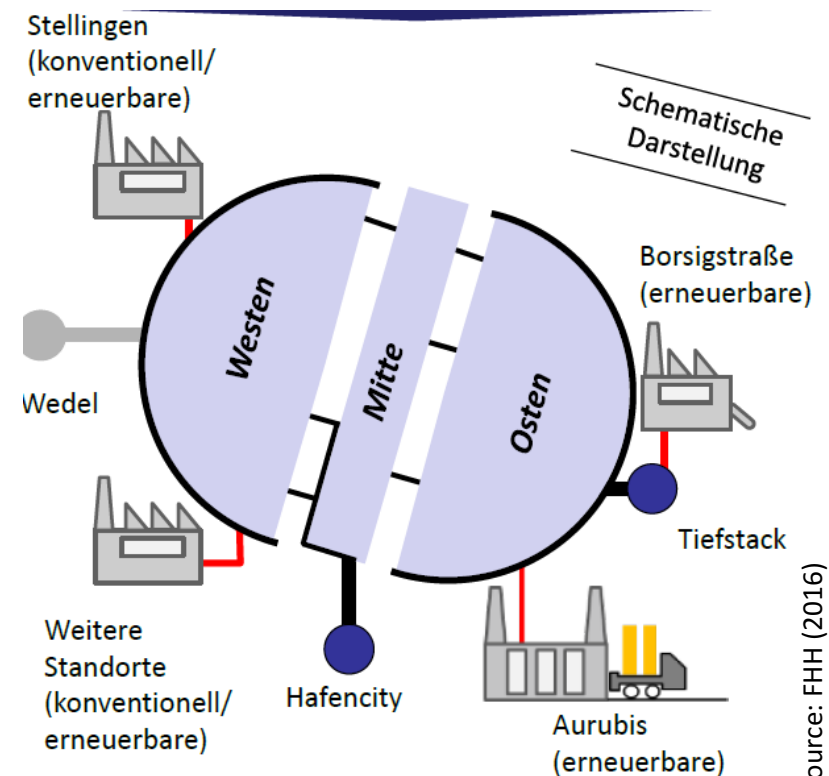
The ownership of the power, gas and heat network allows a „**socially just, climate compatible and democratic control** of the energy supply“

Claim of opponents:

- Risk for public finance
- Risk of the system of the “Energiewende”
- The state as poor entrepreneur

Stakeholder process on the alternatives to the power plant Wedel

- Multi-stage process including interviews with stakeholders, presentation and discussion of preliminary results and priority setting
- Incorporates the goals of the referendum
- Assessment of different technologies (both conventional and renewable), waste heat and demand reduction through criteria of
 - Profitability,
 - Social justice,
 - Climate compatibility,
 - Energy security and technologies



Results



- The assessment presents action corridors, not a single solution
- All options that are based on CHP or renewable energies result in CO₂ emission reductions when compared to the existing power plant
- The integration of waste heat from large industrial units presents an viable option
- The integration of renewable energies is recommended, but requires a combination with CHP, however in smaller scale
- Engines provide the advantage of double flexibility which allows for a sequential set-up and modular usage. However, detrimental effects in NO_x, particulate and noise emissions can be expected

Energy Network Council



- Democratic control through civil society representatives, (including initiatives, NGOs), science, economic representatives, esp. from field of renewable energies, and parliamentary groups
- Explicit political mandate to give advice to the political leaders, the environmental administration and (municipal) companies in the energy sector
- Disclosure of work on website
- Public question times previous to the meeting

Transformation of technological set-ups and governance



- Hamburg is taking steps in the direction of participatory governance, presenting a learning process for all parties involved
- Heat policy and politics address not mainly a technological challenge but can be foremost understood as a social process
- Problems lay in trust building and different logics and realities of the actors involved
 - Political campaign – assessment process
 - Political opponents, now coalition partner
 - Government – administration
 - Climate protection vs. economic viability of established business models
 - Centralised – decentralised supplies
 - New vs. established business models
 - Conflicts of usage in a city

Thank you very much for your attention



Questions?