

Transforming the German Building Sector: Targets, Policy Framework and Challenges

Research-policy workshop on heat decarbonisation
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Our Profile

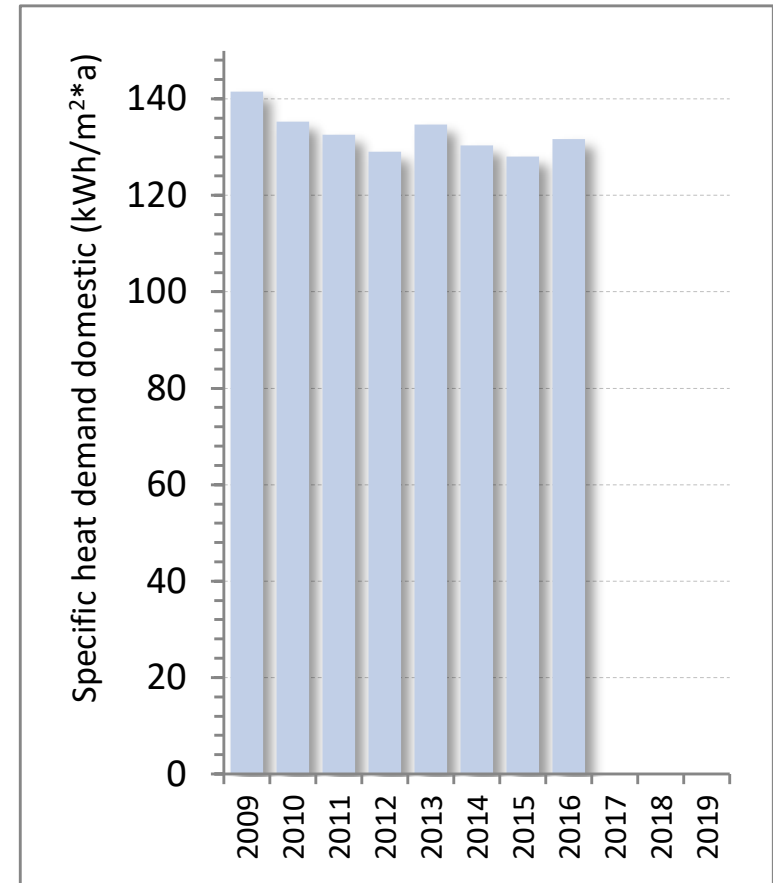
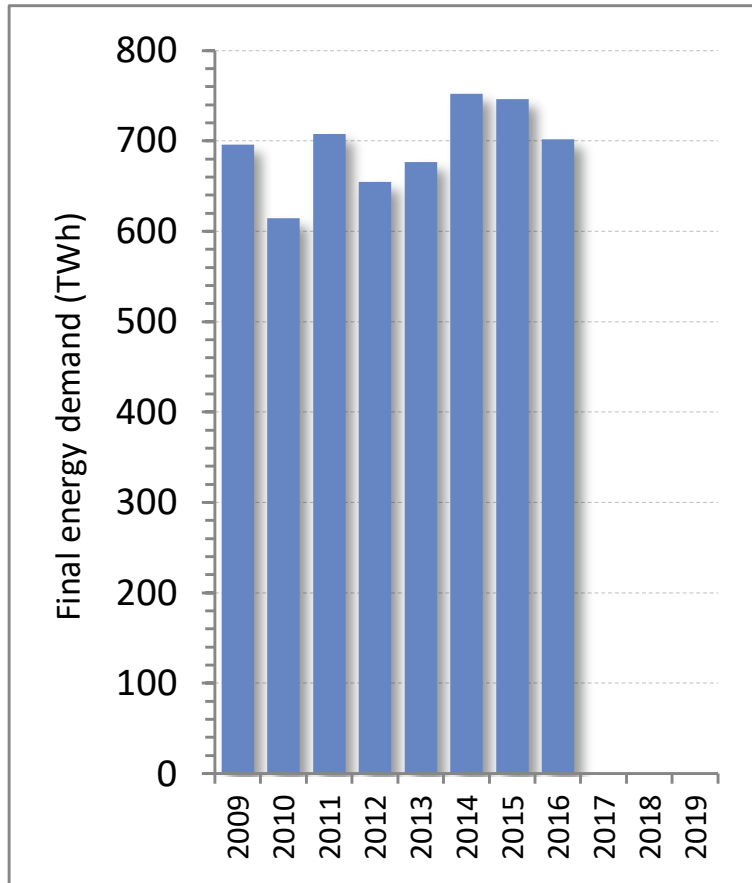
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- More than 170 staff
- Clients: European Union, national and state-level ministries, companies, foundations and non-governmental organizations

Where do we currently stand?

Final energy demand of the building sector not sufficiently decreasing

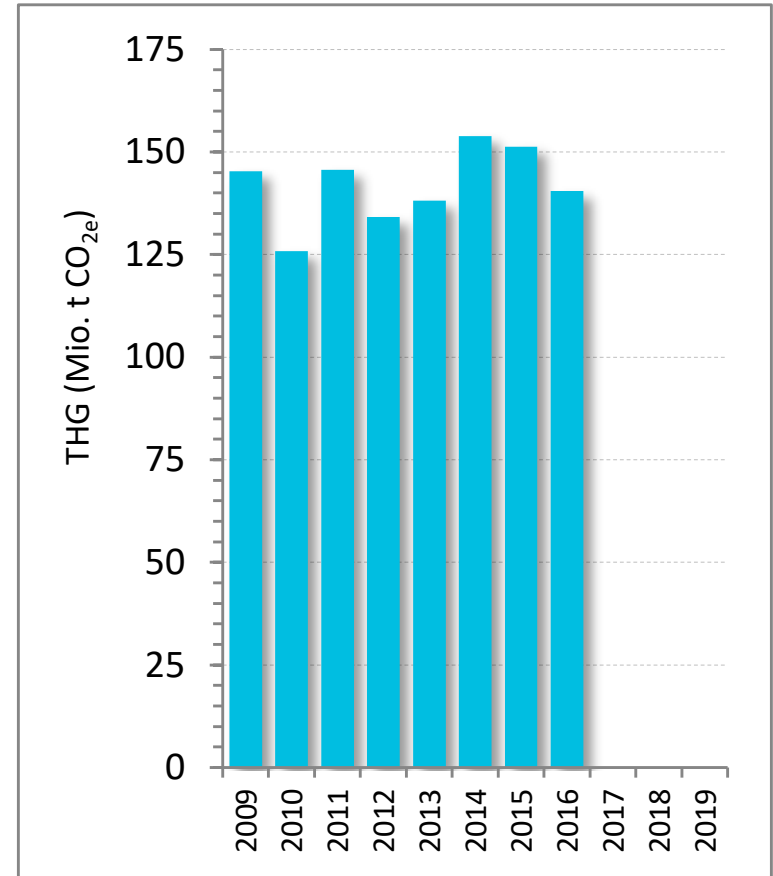
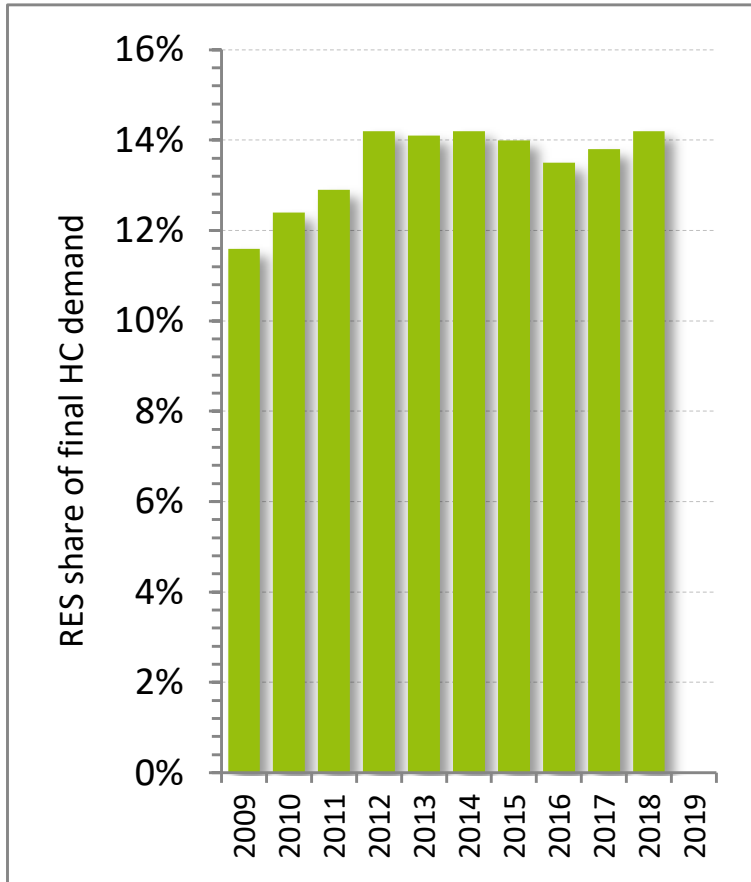


Source: Öko-Institut (2019)

Where do we currently stand?

RES share in HC sector stagnating...

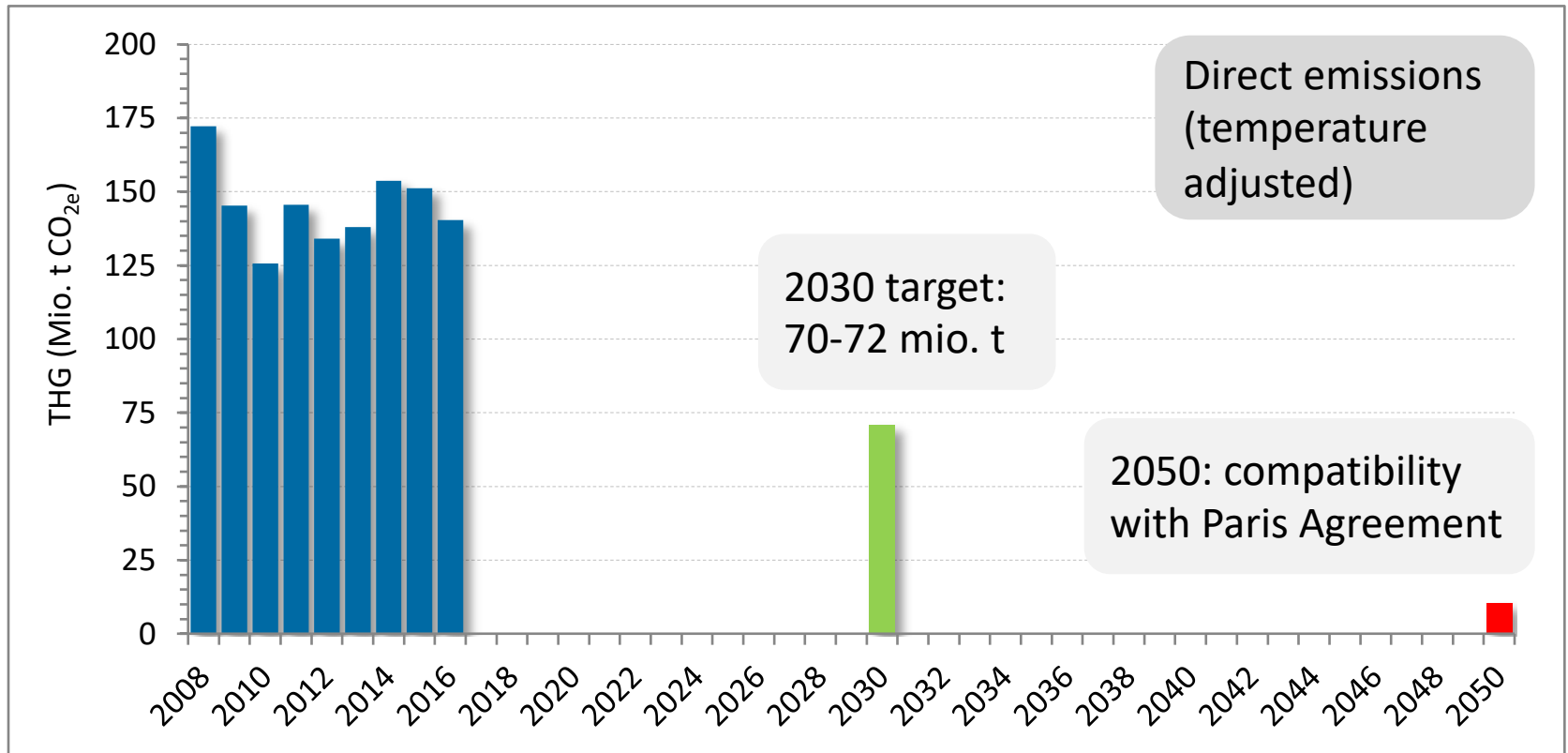
...so do the sector's CO₂ emissions



Source: Öko-Institut (2019)

What are the targets?

THG-emissions of the building sector (domestic + non-domestic)



Source: Öko-Institut (2019)

The latest policy developments

...resulting from a failure to meet our 2020 targets and public pressure (school strikes)

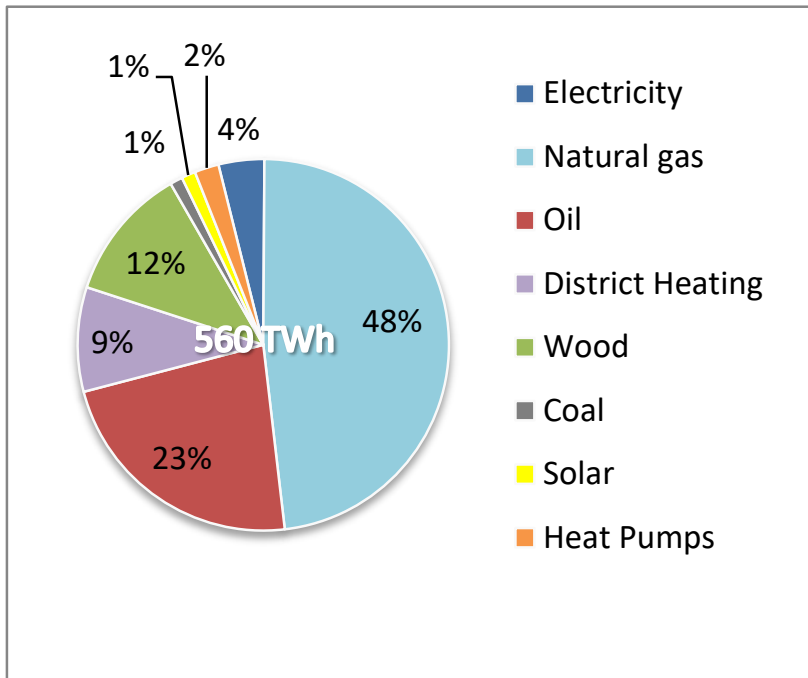
Amongst others

- Introduction of CO₂-pricing for non-ETS sectors
- Tax incentives for refurbishment measures
- Improving the support conditions and available support budgets of existing programs (efficiency measures + RES)
- Specific support for prefabrication/industrialised retrofits (Energiesprong concept)
- As of 2026 ban of new monovalent oil boilers *“if a climate-friendly alternative is available”*

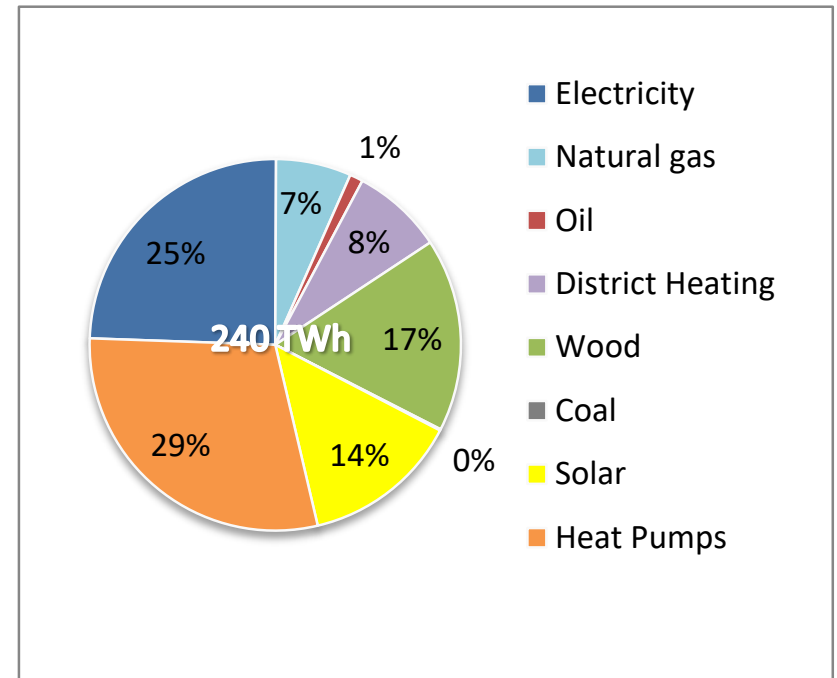
How do our heating systems look like today?

Final energy mix for heating + domestic warm water, domestic buildings

...and how it could/should look like in 2050



Source: AGEB (2018)



Source: Öko-Institut (2015)

What are the main challenges with regard to the transformation of our heat supply? – Example 1

Densely populated areas (city centres) with

- limited potential for deep retrofits (protected facades etc.)
- limited on-site potentials for decentralized RES

...will depend on energy supply from outside of the city

- DH -> produced by RES-H and RES-E
- Electricity -> produced by RES-E
- Gas -> PtG produced by RES-E

Challenges:

- development of the infrastructures (DH)
- providing sufficient areas close to the cities for RES production
- public acceptance



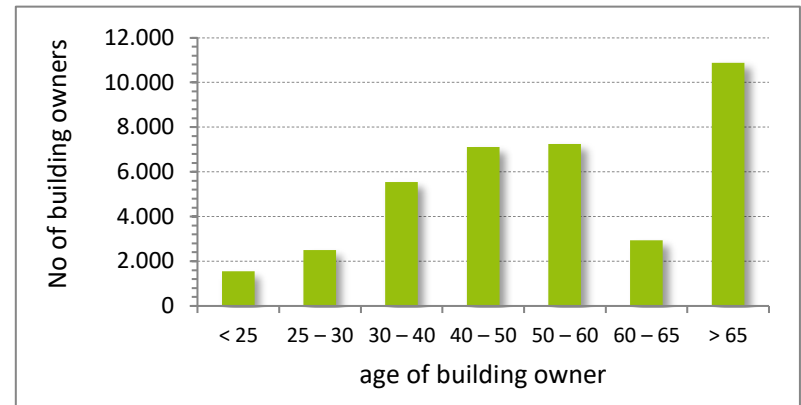
What are the main challenges with regard to the transformation of our heat supply? – Example 2

Typical un-refurbished single and double family houses in rural areas

- Often gas grid not available
- Heat pumps lacking efficiency due to high temperature levels in the internal distribution system
-> requires retrofit of the buildings first
- Biomass: limited resource that should better be used in other sectors
- DH: Energy density often too low

Moreover

- Nearly one third of owners of older houses is over 65 years old



Source: Destatis (2016)

Thank you for your attention!

Do you have any questions?



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