Financial incentives for better quality of the works – Austrian example

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Objectives of Austrian QUALICHeCK study

- **Objectives**
  - To analyse **the range of deviation of EPC energy performance indicators depending on the quality of input data** and the type of EPC (design EPC and completion EPC, in Salzburg region required for financial incentive)
  - To analyse the cause of deviation including **on-site visits of selected buildings**
- **Scope**
  - **26 multi-unit new residential buildings** in rural and urban areas in the province Salzburg, well documented with EPC issued after 2009 (design EPC and completion EPC), approximately 30,000 m²
  - Focus of analysis on 4 scientific / technical areas:
    - Transmission characteristics
    - Ventilation and airtightness
    - Sustainable summer comfort technologies
    - Renewables in multi-energy systems

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On-site visit visual checks based on EPC data and experts interviews – checking irregularities detected during EPC analysis

Building physics

- Check of geometrical data, building orientation, azimuth angle

Windows – window installation

- Window type, door type and openings, thermal bridges, window frame insulation, shading / overhangs

Unconditioned area

- Cellar and staircase conditioned? Indoor temperature, heat dissipation system

Building services technology

- Heating system check, forerun temperatures, system changes not in line with technical planning, discussion with facility managers

→ Quality of the works ✓ **What is the reason?**

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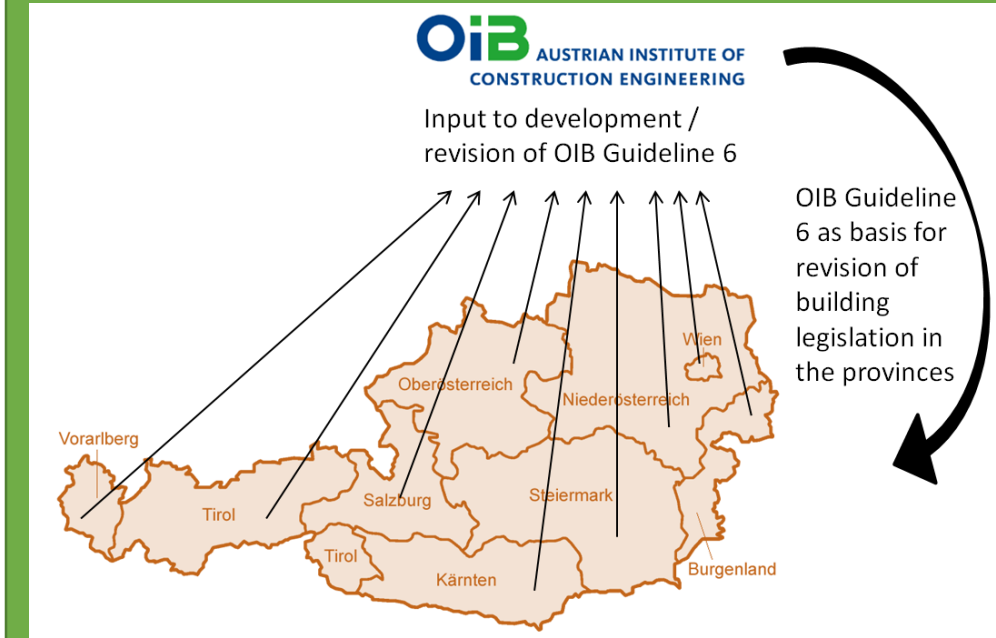
Legal framework of energy efficiency in residential buildings

Energy efficiency legislation: mandatory energy minimum requirements and **EPC required for building permit** at the regional level, but harmonised approach (however, still differences)



Public funding for better energy efficiency than required by the building legislation – legislation according to Art 15a Constitutional Law

Conditions for receiving subsidies for new buildings and renovations:

1. **Household income** must not exceed a defined limit
2. **Energy performance demonstrated by the EPC must be better than required by law** → it is mandatory to meet more ambitious minimum requirements; additional incentives can be given for improved energy performance better than minimum requirements

Positive: Range of household income is very wide → a big part of construction activities in the residential sector is under this scheme (e.g. Province of Salzburg: ca. 30 % of new constructed flats)

Negative: Requirements and compliance checks scare people off, share of funded buildings has been decreasing

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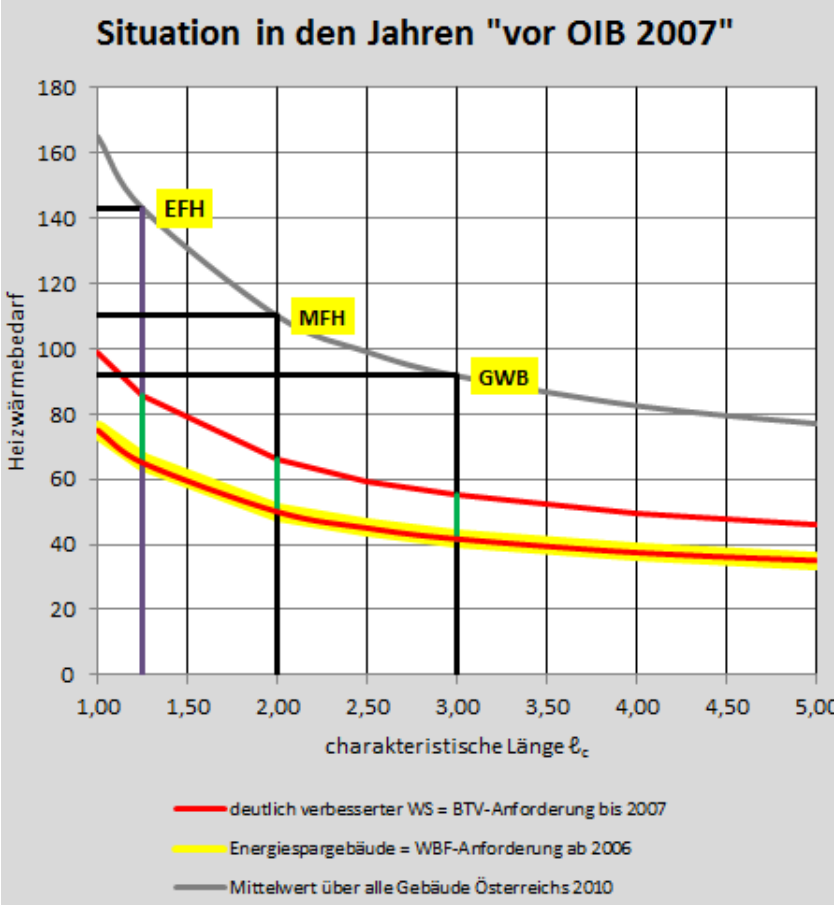
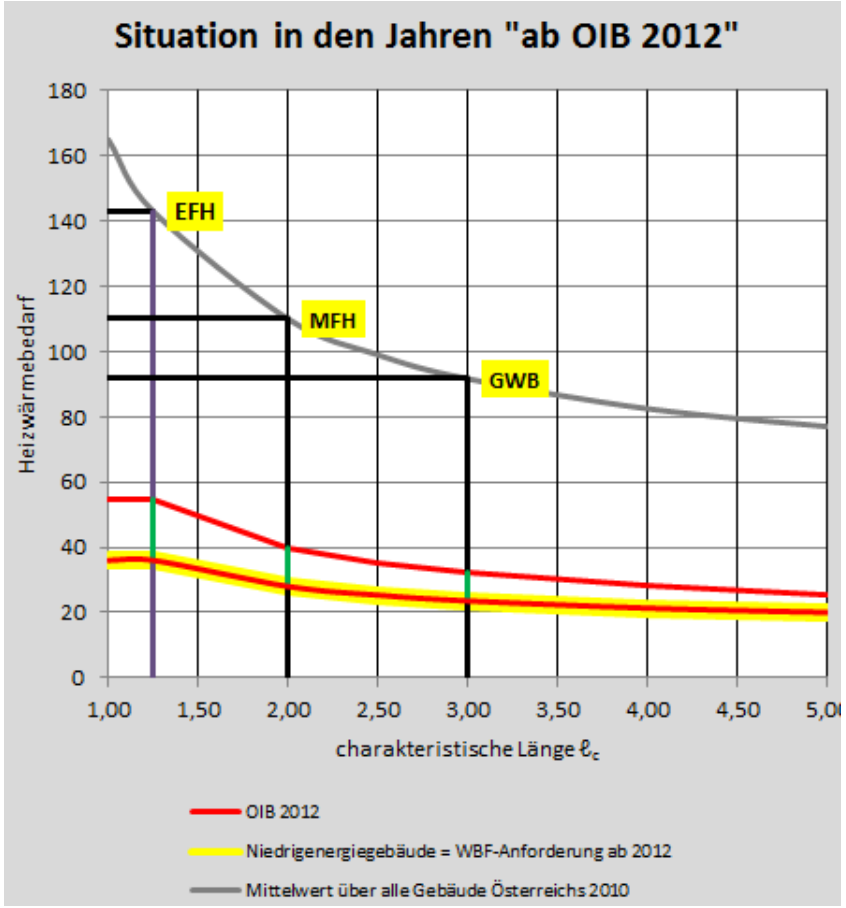
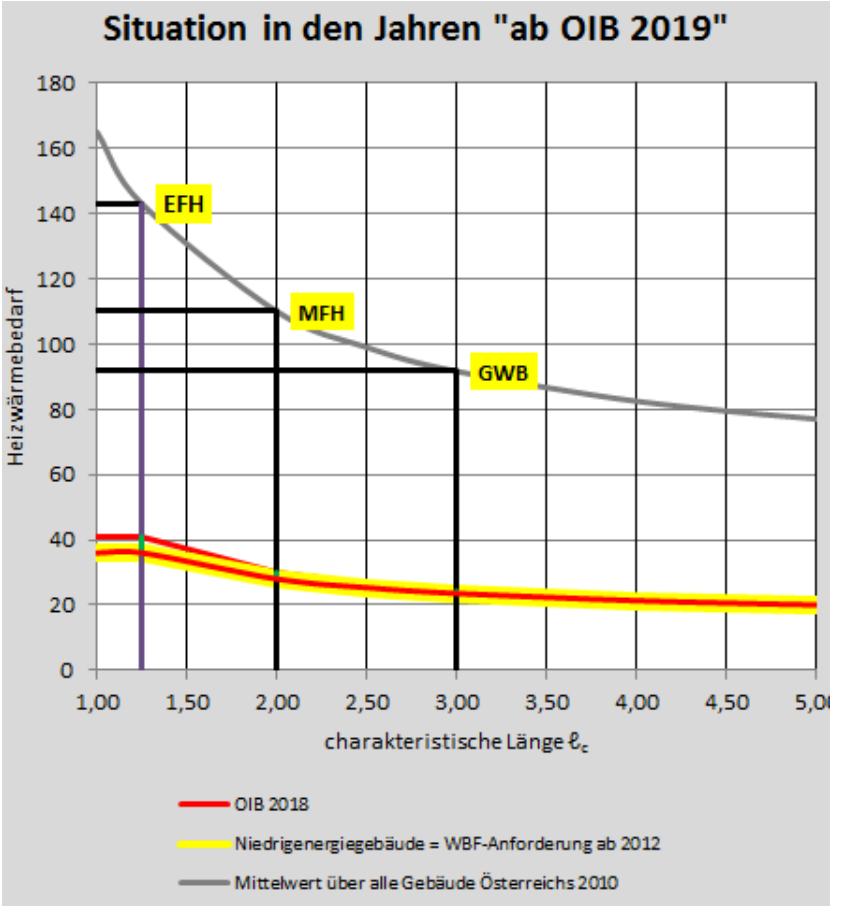
Compliance and quality of the works: focus is on the subsidy scheme – requirements become legislation from 2019 on







EFH – single family house
MFH - multi unit residential building
GWB – large residential buildings
Charakteristische Länge – Surface to volume ratio
OIB – OIB Guideline – basis for regional building legislation

Heizwärmebedarf – Heating energy demand
Red line – minimum requirement according to building legislation
Yellow line – minimum requirement according to subsidy scheme
Grey line: average of building stock

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Exemplary description of subsidy scheme

- Several options in the province of Salzburg
- Example: Subsidy for developers constructing multi-residential buildings for rent (there are defined conditions for renting the units)
  - Type of subsidy: grant, paid after completion of the building and requirements fulfilled; application before start of construction based on design EPC and having consulted the responsible department of the public authority is mandatory
  - Amount: Depending on useful area and paid per m2 useful area: up to 500 m2 useful area grant is EUR 650 per m2, and above 2,500 m2 grant is EUR 550 per m2 useful area; between 500 m2 and 2,500 m2 the grant is adapted accordingly
  - For better energy performance than necessary for the basic subsidy (which is already more ambitious than the requirements according to building legislation), additional grant is available

In case of non-compliance: penalty versus collaborative quality assurance to improve quality of the works

Amount of money is substantial → incentive is high to enter the subsidy scheme

Penalties in case of non-compliance:

- **In theory:** loss of subsidy in case minimum requirements are not met
- **In practice:** not possible because … loss of societal support

Therefore: focus on quality assurance

- Close cooperation between public administration and the developers/building owners.
- Very effective because not only detection of mistakes but also suggestions how to improve to meet the requirements → public administration needs qualified personnel or contracts out to a third party.
- As a consequence of control, developers of multi-unit residential buildings have established their internal quality assurance schemes and have been working on constant improvement.
  Challenge: single family houses.

Thank you for your attention!

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