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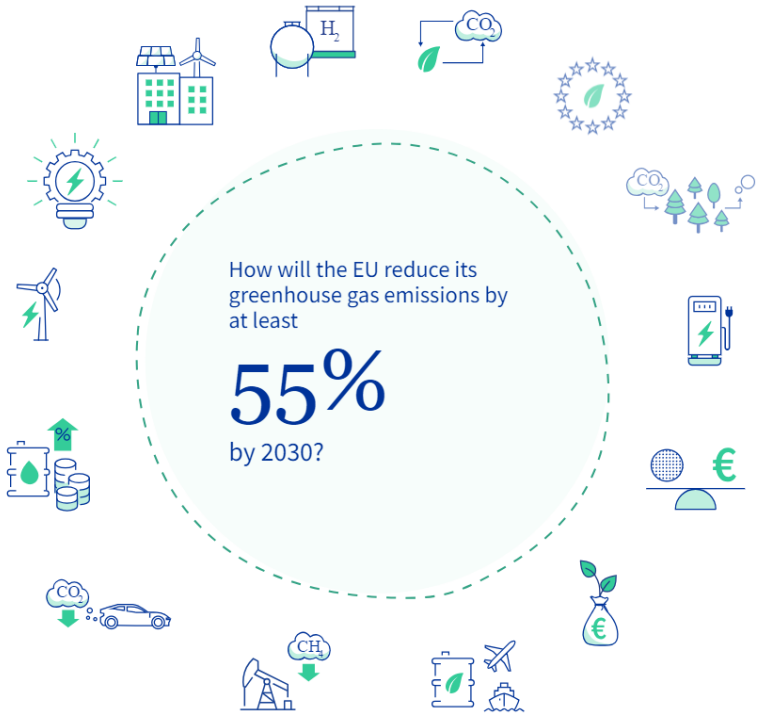
Regulatory requirements



Energy Performance of Buildings Directive (EPBD)

Gebäudeenergiegesetz (GEG)

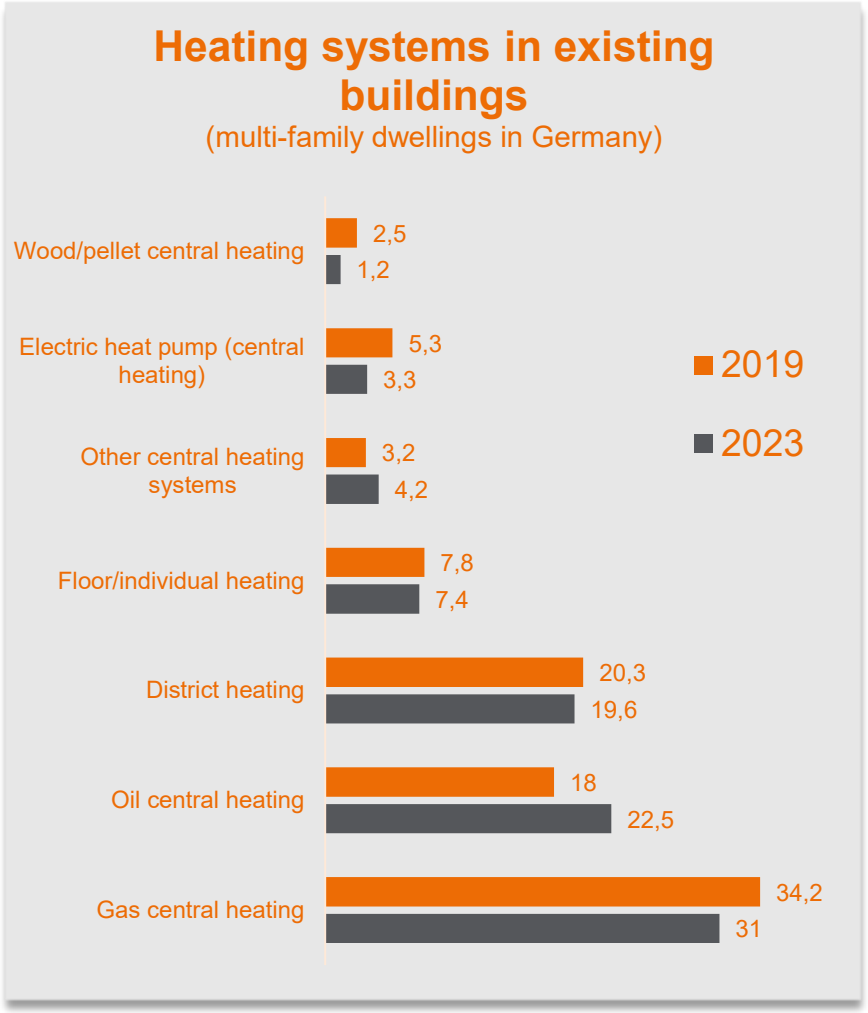
Source: https://www.consilium.europa.eu/de/policies/fit-for-55/

Icons: https://www.flaticon.com/de/kostenlose-icons/

Regulatory requirements

Gebäudeenergiegesetz (GEG) § 60b
>> Older, water-based heating systems <<

- Inspection and optimisation of heating systems in buildings with 6 or more residential units
- **Heating system installed after 1 October 2009**
  Operational inspection within 12 months, 15 years after commissioning.
- **Heating system installed before 1 October 2009**
  Operational inspection by 30 September 2027 at the latest
- Required optimisation measures must be carried out within one year.



Source: BDEW study "How will Germany heat in 2023"
https://www.bdew.de/media/documents/BDEW_Heizungsmarkt_2023_Langfassung_final_28.11.2023_korrigiert.pdf

Source: https://www.gesetze-im-internet.de/geg/__60b.html

Regulatory requirements

Gebäudeenergiegesetz (GEG) § 60b
>> Older, water-based heating systems <<

- Implementation by a competent person
  (e.g. chimney sweep, heating engineer, electrical engineer, energy consultant)
- The results and any optimisation requirements must be sent to the responsible party in writing.
- Proof of optimisation must be provided to the tenant in writing upon request.
- Non-compliance: Administrative offence pursuant to GEG § 108 sentence 1 no. 6 (up to 5,000 euros)

Source: https://www.gesetze-im-internet.de/geg/__60b.html

Regulatory requirements

Gebäudeenergiegesetz (GEG) § 60b
>> Older, water-based heating systems <<

- **Lowering the flow temperature** or optimising the heating curve in the event of gross misadjustments
- Activation of **night-time reduction, night-time shutdown** or other reductions or shutdowns of the heating system appropriate to the usage profile and the ambient temperature, and information for the operator, in particular regarding **summer shutdown**, holiday reduction or presence control
- **Optimisation of circulation operation**, taking into account applicable health protection regulations
- Checking the correct **setting of the circulation pump**
- **Lowering of hot water temperatures**, taking into account applicable health protection regulations
- **Lowering the heating limit temperature** to reduce the heating period and days

Source: https://www.gesetze-im-internet.de/geg/__60b.html

REQUIREMENT PROFILE

- Suitable for almost any property size
- Reveal potential for optimisation
- High granularity of measurement data

Advantages

- Use of existing measurement technology
- Low investment costs for additional technical equipment
- Low and apportionable operating costs

Added value

- Early detection of technical problems
- Reduce personnel deployment and lower operating costs

GUTACHTEN

Umlagefähigkeit von Monitoringsystemen nach § 2 Betriebskostenverordnung (BetrKV) außerhalb und innerhalb von Wohnraum

Leipzig, 17.06.25

Auftraggeberin: Deutsche Energie Agentur GmbH
(dena)
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Source: https://www.kedi-dena.de/fileadmin/kedi/Dokumente/KEDi_Rechtsgutachten_Umlagefaehigkeit_von_Monitoringsystemen.PDF

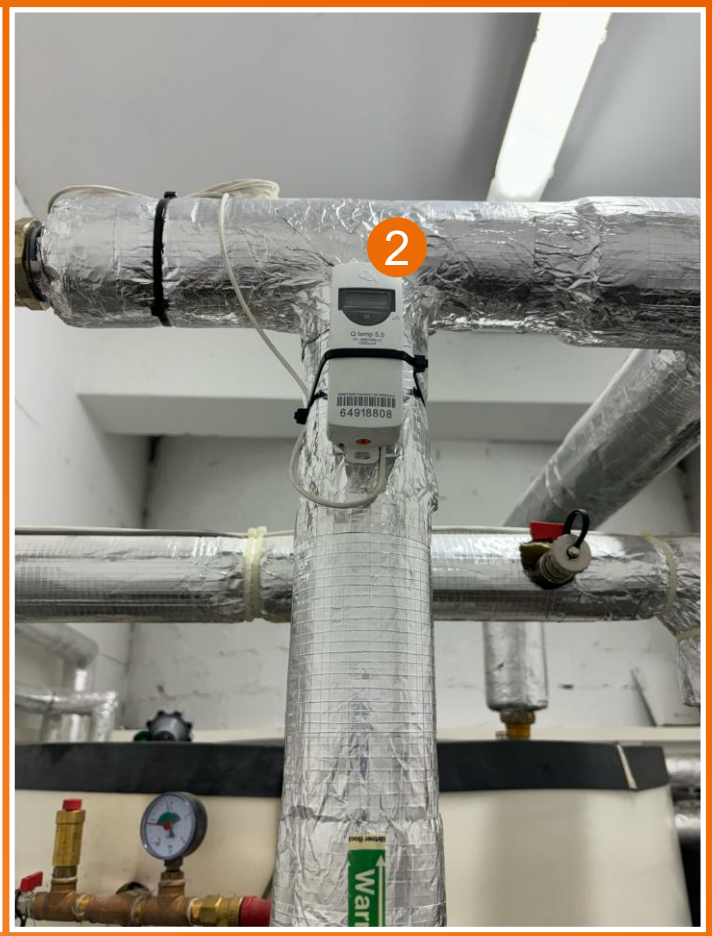
heat meter

- Cumulative energy
- Current flow and return temperature
- Current volume flow
- Current energy

Collection of relevant measurement data

Inspection points in accordance with § 60b GEG	Contribution of heat meter data
Lowering the flow temperature	Measuring the flow- and return-temperatures and ΔT enables an assessment of whether the heating curve is optimally set.
Night-time reduction, summer shutdown	Time series of energy output show whether heating continues at night or when outside temperatures are high.
Optimisation of circulation operation (DHW)	
Adjustment of the circulation pump	Volume flow data and energy output reveal whether the pump is oversized or incorrectly set.
Reduction of hot water temperatures	
Lowering the heating limit temperature	Energy output in relation to the outside temperature shows whether the system is switching off too early or too late.

Collection of relevant measurement data



Measured values Q heat

- Cumulative energy
- Current flow and return temperature
- Current volume flow
- Current energy

Measured values Q temp

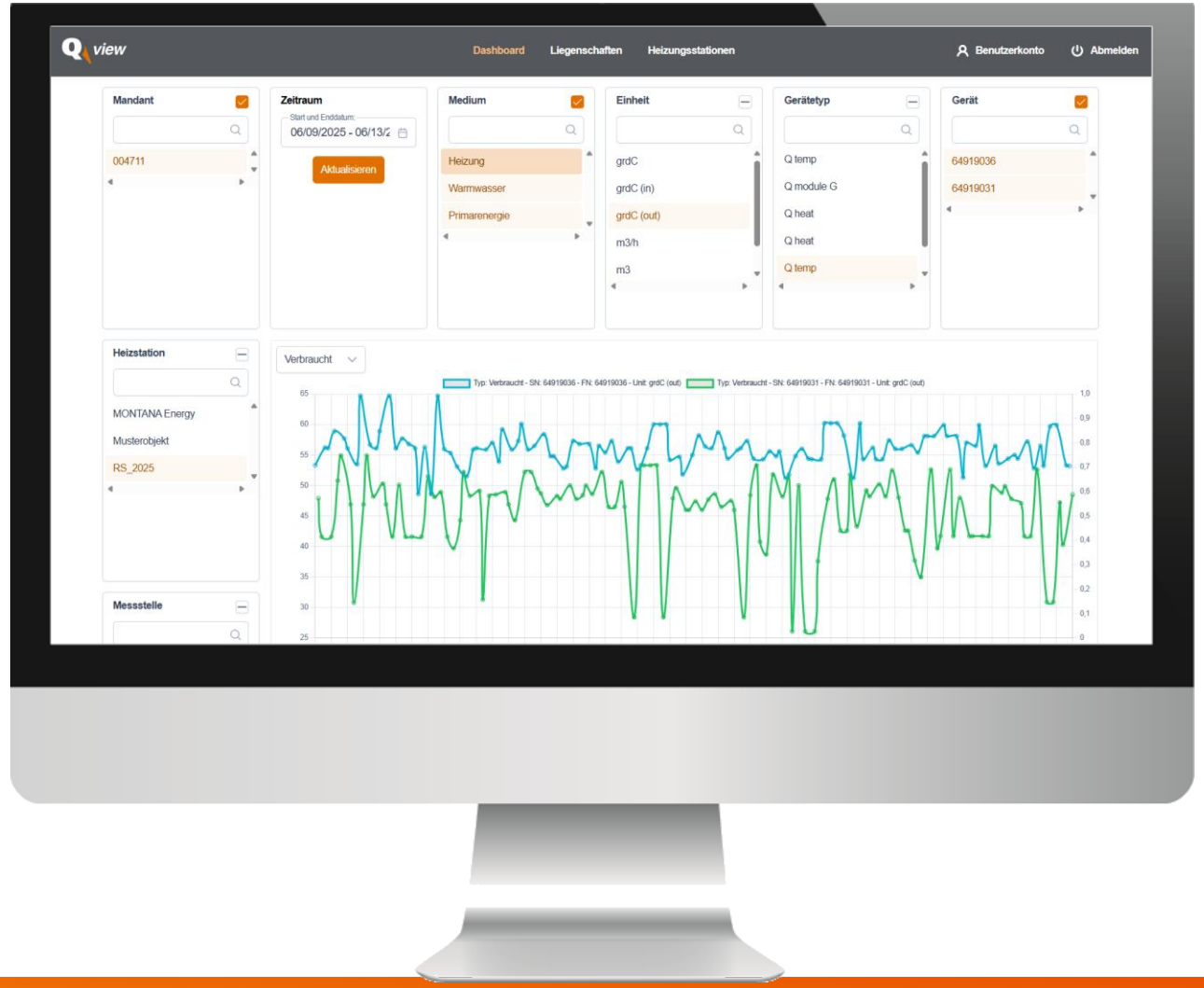
- Current temperature
- Max. temperature previous day
- Min. temperature previous day
- Hourly averages previous day

1 Before each heating circuit & hot water storage*

2 at the hot water outlet/circulation

* Recording the energy consumption of hot water preparation using a heat meter is mandatory in accordance with the Heating Costs Ordinance §9 cl. 2.

Visualisation



- Identify potential for optimisation
- Detect and report anomalies
- Verify need for action upon notification

Conclusion

- Heat meters support heating inspections in accordance with § 60b of the Gebäudeenergiegesetz (GEG) by providing objective measurement data.
- They enable continuous, data-based optimisation instead of a one-off check.
- The results are energy savings, increased efficiency and transparent documentation.
- Dual use of measurement data: a "treasure" in (almost) every boiler room that needs to be tapped.

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Ein Unternehmen der
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