

Climate Protection in Germany – How Can the Heat Transition Succeed in the Real Estate Sector? Governance, Investments, and Mobilization of Private Property Owners

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Key words: Real estate development; Spatial planning; Valuation

SUMMARY

The transformation of Germany's heat supply is essential for achieving greenhouse gas neutrality by 2045, as mandated by the Climate Protection Act and aligned with the UN's Sustainable Development Goals, particularly Goals 7 (affordable and clean energy) and 13 (climate action). The building sector plays a pivotal role, accounting for 85% of heat consumption and nearly 30% of energy-related CO₂ emissions. In 2021, residential buildings alone emitted approximately 147 million tons of CO₂, emphasizing the urgent need for action. Currently, Germany's heat supply heavily relies on fossil fuels, with 40% of demand met by natural gas, 20% by heating oil, and only 19% by renewables. While emissions in the building sector fell by over 40% between 1990 and 2020, progress has slowed. The annual renovation rate stands at 1.4%, far below the necessary levels to meet climate goals, and limited data on building energy efficiency and heating system modernization impedes targeted planning. A large portion of Germany's building stock suffers from poor energy performance. Around 36% to 42% of properties listed for sale fall into energy efficiency classes below E, requiring significant renovation. Older buildings typically exhibit worse performance. Private property owners, who own over 80% of residential units, are key to driving the heat transition. Their willingness to invest hinges on clear financial benefits and property value improvements resulting from renovations. Municipal Heat Planning (KWP) is a strategic tool to decarbonize heat supply and increase renewable energy use. Measures include expanding district heating, utilizing waste heat and geothermal energy, and creating climate-neutral neighborhoods. The 2024 Heat Planning Act requires all federal states to develop comprehensive heat plans by 2028. These efforts aim to provide investment certainty and planning clarity for stakeholders. The heat transition faces challenges at federal, municipal, and private property levels. Engaging private property owners is particularly critical yet difficult. Transparent information about the benefits of energy efficiency, supported by research and clear policies, is vital to fostering participation. While an increasing number of studies show a positive correlation

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between a building's energy efficiency (when transparently disclosed) and real estate prices or rental income, long-term predictability and financial security are decisive factors. Many private owners rely on their properties as retirement investments, making this issue even more pressing. □ □ Greater transparency and more robust data and research on the cost-benefit dynamics of energy refurbishments could boost confidence in investments. By addressing these concerns, Germany could enhance acceptance of climate protection measures while safeguarding assets and accelerating its transition to a climate-neutral heat supply. □ □ □ □ □ □ □ □

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