Net present value comparison between an unrenovated single-family house with hydrogen heat supply and a building renovation including an air heat pump in 2025

Figure 15

Total cost [kEUR] 100 80 20,000 EUR savings 60 40 20 0 4.5 EUR/kg 3.5 EUR/kg 2.5 EUR/kg Uninsulated Insulated Partially insulated H₂ boiler Heat pump Capex Maintenance Infrastructure Opex Insulation

Öko-Institut (2021)

Notes: Heat pump costs decrease by 20% until 2025. The electricity price follows price path 3 from figure 2–3 in Öko-Institut (2021), i.e. from 21 ct/kWh (2020) to ~15 ct/kWh (2025) and 14 ct/kWh (post 2030). This is based on the assumption of an EEG surcharge phase-out by 2025, which would decrease the electricity tax to an EU minimum in 2030, and of a heat pump tariff, all without VAT.