Heat Loss vs Outdoor Temperature - Residential Evaluation

This report analyzes the relationship between outdoor temperature and total heat loss of a typical home. The results are derived from public data sources on thermal transmittance and housing energy labels.

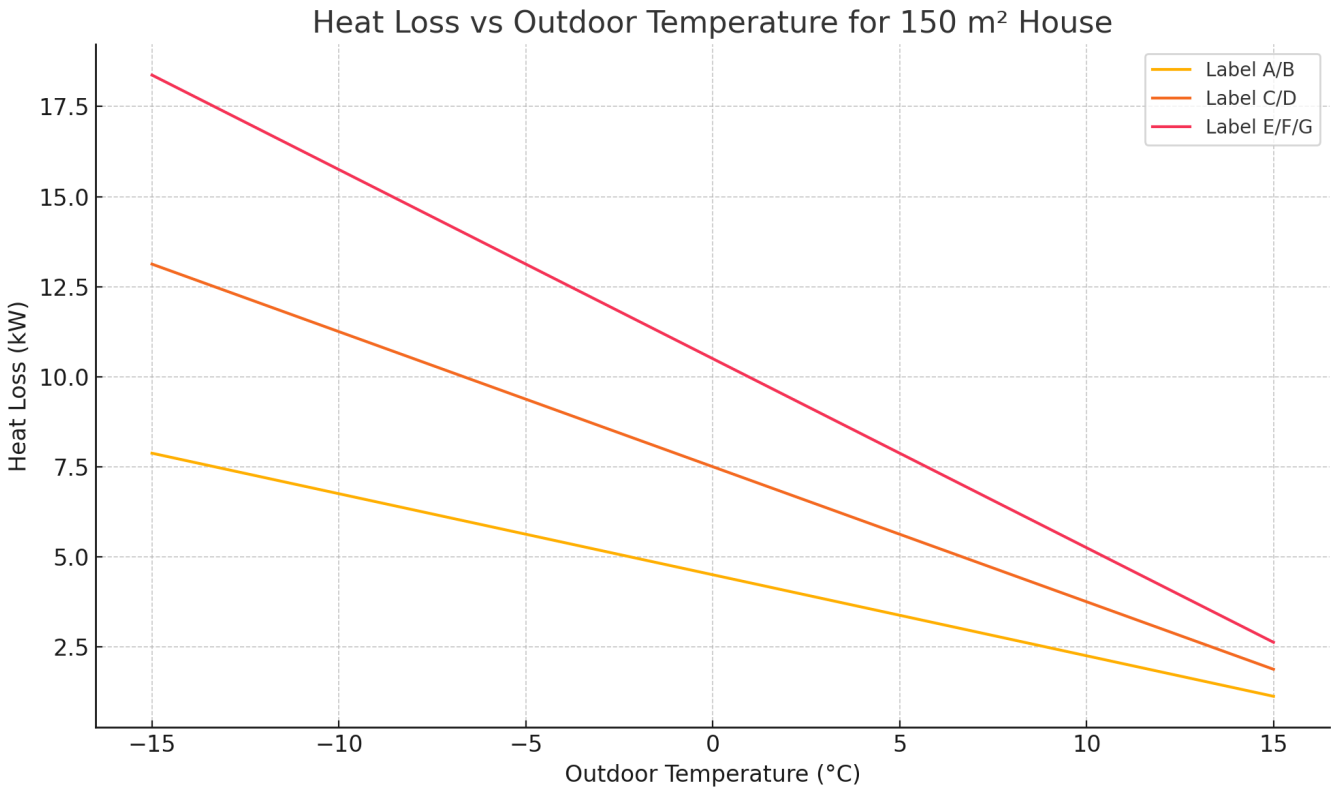
The model assumes a fixed indoor temperature of 20C and uses the building's energy label to estimate heat loss per square meter and per degree of temperature difference.

General Formula:

Q = m * A * (20 - T) / 1000 [kW]

Where:

Q = total heat loss, A = floor area in m2, T = outdoor temp, m = label-specific factor



Heat Loss Coefficients by Energy Label

Label A/B: Q = 1.5 × A × (20 - T) / 1000 | Accuracy: ±10%

Label C/D: Q = 2.5 × A × (20 - T) / 1000 | Accuracy: ±15%

Label E/F/G: Q = 3.5 × A × (20 - T) / 1000 | Accuracy: ±20%