

P 3. ENERGY EFFICIENCY AND CARBON EMISSION POTENTIAL COMPARISON OF HEATING SYSTEMS

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ABSTRACT: The aim of this study is to create a decision-making methodology for fuel performances and greenhouse gas emissions of heating systems by considering combination of financial and non-financial criteria, which are dependent on the region and the people, and to show logical choices numerically. For this purpose, a specific building with its architectural drawings was specified and heat loss equations were observed by using MS Excel according to TS 825- Thermal Insulation Requirements for Buildings .Calculations of heat loss were performed separately for four different types of heating zones in our country by selecting different cities in these zones. Bu using heat losses that were calculated based on placing the building in different zones, different types of heating strategies were determined. Moreover, fuel costs, installation cost and greenhouse gas emissions were determined based on different fuel usage ratios. These calculations and observed criteria were investigated and tried to explain. The results of the comparison of these selections was given in this present study.

Keywords: Heating systems, Fuel calculation, Greenhouse gas emissions, TS-825 Thermal Insulation Requirements for Buildings