

Full-scale instrumented residential ground source heat pump systems in Melbourne, Australia

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Abstract

Ground-source heat pump (GSHP) systems typically show higher efficiencies than conventional systems for space heating and cooling of buildings. However, the availability of GSHP systems performance data is still limited, especially in Australia due to the small number of GSHP systems installed and monitored. This paper provides some initial results from a GSHP systems monitoring project conducted on ten residential properties in the greater Melbourne region of Australia. The data measured reveals an estimated Coefficient of Performance between 2 and 4.9. The reasons for these variations in measured system efficiency with respect to design expectations are discussed.