

Energy Performance of Buildings Due to Downscaled Seasonal Models

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Abstract : The present work examines the suitability of a seasonal forecasting model downscaled with a very high spatial resolution in order to assess the energy performance and requirements of buildings. The application of the developed model is applied on Greece for a period and with a forecast horizon of 5 months in the future. Greece, as a country in the middle of a financial crisis and facing serious societal challenges, is also very sensitive to climate changes. The commonly used method for the correlation of climate change with the buildings energy consumption is the concept of Degree Days (DD). This method can be applied to heating and cooling systems for a better management of environmental, economic and energy crisis, and can be used as medium (3-6 months) planning tools in order to predict the building needs and country's requirements for residential energy use.

Keywords : downscaled seasonal models, degree days, energy performance

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