

Modelling Residential Space Heating Energy for Romania

Authors : Ion Smeureanu, Adriana Reveiu, Marian Dardala, Titus Felix Furtuna, Roman Kanala

Abstract : This paper proposes a linear model for optimizing domestic energy consumption, in Romania. Both techno-economic and consumer behavior approaches have been considered, in order to develop the model. The proposed model aims to reduce the energy consumption, in households, by assembling in a unitary model, aspects concerning: residential lighting, space heating, hot water, and combined space heating - hot water, space cooling, and passenger transport. This paper focuses on space heating domestic energy consumption model, and quantify not only technical-economic issues, but also consumer behavior impact, related to people decision to envelope and insulate buildings, in order to minimize energy consumption.

Keywords : consumer behavior, open source energy modeling system (OSeMOSYS), MARKAL/TIMES Romanian energy model, virtual technologies

Conference Title : ICEM 2015 : International Conference on Energy and Management

Conference Location : Barcelona, Spain

Conference Dates : August 17-18, 2015