

عنوان مقاله:

Optimal Planning of Energy Resources in a small energy system under the Smart Home Concept

محل انتشار:

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خلاصه مقاله:

This paper investigates the optimal management of a renewable based energy supply design for a residential building equipped with smart communication and metering infrastructures, approaching the smart home (SH) concept. The best economically optimal model is selected in each case based on the net present cost (NPC) and the cost of energy (COE) criteria. Mutual effects of the inflation rate uncertainty, project life-time span and a comparative model to study the use of combined heat and power (CHP) technology on the objective function have been modelled. An economic index related to environmental issues and one related to the thermal load supply have been defined and analysed.

Finally a conclusion has been done according to results achieved throughout the study

کلمات کلیدی:

Smart home (SH), Hybrid energy system (HES), Economic feasibility, Net present cost (NPC), Sensitivity analysis, Environmental issues

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