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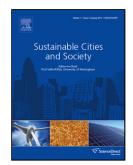
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## ACCEPTED MANUSCRIPT

PARAMETRIC BASED ECONOMIC ANALYSIS OF A TRIGENERATION SYSTEM PROPOSED FOR RESIDENTIAL BUILDINGS

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### **Highlights**

- Proposed trigeneration system is assessed on the basis of economic concepts.
- Economic indices are calculated under different operating and economic parameters.
- The parametric-based economic analysis is performed for assessing the project feasibility under different scenarios.
- Optimization of NPV is performed for various load conditions.
- The economic feasibility is assessed for a case of residential buildings in different economic scenarios.

#### **ABSTRACT**

This paper deals with the economic analysis of a trigeneration system proposed for buildings. Firstly, a general feasibility analysis is presented for power and heating (P&H), power and cooling (P&C) and power, heating and cooling (PH&C) modes of operation using economic indices payback period (PBP) and net present value (NPV). Results show that the total cost of investment

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