

## Accepted Manuscript

Title: A SYSTEMS SIMULATION FRAMEWORK TO  
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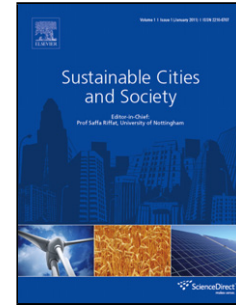
PII: S2210-6707(18)30164-1  
DOI: <https://doi.org/10.1016/j.scs.2018.05.045>  
Reference: SCS 1123

To appear in:

Received date: 29-1-2018  
Revised date: 29-4-2018  
Accepted date: 25-5-2018

Please cite this article as: Thomas A, Menassa CC, Kamat VR, A SYSTEMS SIMULATION FRAMEWORK TO REALIZE NET-ZERO BUILDING ENERGY RETROFITS, *Sustainable Cities and Society* (2018), <https://doi.org/10.1016/j.scs.2018.05.045>

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## A SYSTEMS SIMULATION FRAMEWORK TO REALIZE NET-ZERO BUILDING ENERGY RETROFITS

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### Highlights

- This paper introduces a standardized simulation approach for strategizing net-zero oriented building energy retrofits.
- The main theme of this framework is a system dynamics simulation ideology to couple the life cycle analysis framework with the energy simulation tool.
- The main highlight of this framework is the ability to analyze how energy efficiency measures perform over a building's extended lifecycle and thereby strategize the renewable energy measures to keep the building at net-zero level.
- This framework could be therefore effectively used to strategize net-zero retrofits in a diverse building stock.

### ABSTRACT

Energy conservation and sustainability have been getting increased attention in the last few years, and in the building industry, a gradual shift is visible towards constructing net-zero energy buildings (NZEBs). In addition to the design and construction of new NZEBs, it is also equally important to find effective strategies to retrofit existing ones, as most buildings in the

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