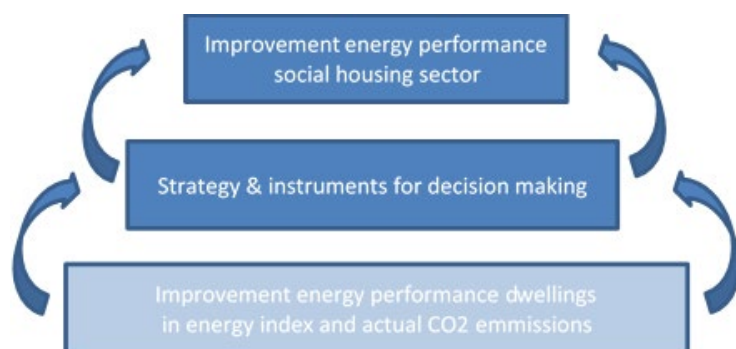


## Towards a CO<sub>2</sub>-neutral social housing sector

**Keywords:** Social housing sector, Energy Performance, CO<sub>2</sub>-emissions, strategies, instruments

**OTB Department Housing Quality and Process Innovation**

**Area of Research: Housing Quality**



**Research Summary:** Housing associations in the Netherlands own 2.4 million dwellings. Goals to improve the energy performance of the dwellings are currently measured in a theoretical indicator: the energy index, but it is expected that these goals will shift in the future to actual energy savings and associated CO<sub>2</sub> -emissions. In this research, the strategies are analyzed that housing associations use to improve the energy performance of their dwellings. Changes in the energy performance can be explained by changes of the stock (demolishing and new build) and changes within the stock like changed insulation, installations, ventilation or solar power installations. Secondly the contribution of the changes of the stock and the changes within the stock to the actual energy savings, and thereby the actual CO<sub>2</sub>-emissions, are examined. The knowledge gained from these analysis is the basis for the second research goal to improve instruments housing associations use, to make decisions on how to further improve the energy performance of their dwellings. This will support housing associations to make the shift to improve the energy performance from a theoretical energy index towards an actual CO<sub>2</sub> neutral social housing sector.

**Research Methodology:** Annually the energy performance characteristics of over two million dwellings of social housing associations will be collected to determine strategies used to improve the energy performance. Secondly these dwellings are connected to the actual energy consumption of these dwellings available at the CBS to determine the effect on sector CO<sub>2</sub> emissions. Thirdly this knowledge is combined with an analysis of the instruments housing associations use to make decisions to improve the energy performance of their dwellings, to be able to come up with recommendations on how these instruments for decision making can be improved.



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### ***Main Question:***

***How to improve the energy performance of the assets of housing associations by assessing renovation strategies and instruments which support decision making***

***Deliverables:*** several journal papers combined into a dissertation

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