

Approaching the EPBD, the potential of the Tabula project

A focus on the existing residential building stock and its energy performances

Master Thesis

Resource Efficiency in Architecture and Planning (REAP)

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ABSTRACT

Since the European building stock is responsible for high-energy consumptions many efforts are made in order to tackle the problem. The recast of the Energy Performance of Building Directive (EPBD) has set an approach to achieve cost-optimal energy performance requirements for the European building stock. Establish a set of national reference buildings is the first step to consider in order to achieve cost optimality and inexperience in doing so could greatly affect the overall success of the expected results. The thesis focuses on the potential of the Tabula project which aims to create a common and comprehensive platform in which European residential building typologies, with their related building elements and energy performances, are presented. An existing residential building located in Berlin is compared with a German building typology presented within the Tabula project in order to identify similarities and representativeness in terms of structure and energy performances. The comparison has shown that the Tabula project and the Tabula webtool particularly, besides some limitations, could be used to assess energy performances of existing buildings and, with further developments, to introduce the concept of cost optimality of renovation measures.