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# ENERGY OPTIMISATION OF RESEARCH BUILDINGS IN VIENNA WITH A PHOTOVOLTAIC FAÇADE.

## THE IMPORTANCE OF PV FAÇADES IN THE ARCHITECTURAL CONCEPT OF AN ENERGY-EFFICIENT BUILDING

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Abstract
**Research consisting in the analysis, definition of parameters of a high degree of energy efficiency with a guaranteed share of renewable energy is of particular importance in the implementation of the concept of sustainable development. In Vienna, there have been built buildings whose construction and operation inscribe into an extensive research programme that includes an energy management strategy according to the latest standards developed for energy-efficient construction. These buildings, which are represented by research and educational institutions, are a kind of research field for new technologies and solutions to optimise energy consumption. In architectural terms, the implementation of photovoltaic façades signals the high technological level of prototype solutions. The Author's research methodology was based on the analysis of data characterizing new and modernized buildings, carried out on the basis of current internet sources, literature data and local visions during her study trip to Vienna. The aim of the paper is to present the energy concept of buildings, used to optimize energy acquisition and consumption, as a signpost for the application of guidelines and standards in possible Polish solutions.**

Keywords: **Energy-efficient architecture; Energy efficiency; Photovoltaic façade; Renewable energy sources.**