Renovation of old residential areas with solar power generation

The construction industry is one of the major sources of carbon emissions in the country (He et al. 2019).According to statistics, only in 2020, the whole process of national ...

Generate your own electricity with a residential solar power system, locking in your electricity prices for 25+ years. On average, a solar PV system can save you up to EUR1,100 per year on ...

This paper aims to study the required solar panel tilt angle, area, and investment payback period for achieving zero-energy heating in historically significant courtyard-style residential buildings.

The article proposes a topic of great interest with the aim of analyzing CO2 emissions in the renovation process of old residential areas. It presents the case study of a ...

The total construction area of old residential areas (the old residential area refers to the residential area that was built before 2000, the backward public facilities affect the basic life of residents, ...

The building sector has faced high-energy-consumption and environmental pollution issues. The statistics [] show that the total carbon emissions from China"s building industry in all processes amounted to 4.997 ...

Old residential community renovation (ORCR) projects play a pivotal role in advancing sustainable community development and urbanization (Zhou et al., 2021) cause of earlier ORCR ...

old residential areas were scheduled for renovation in 2021, but 55,600 old residential areas have actually begun reno-vations in various parts of China, exceeding the renovation plan at the ...

Non-dominated optimization plan for the renovation project of old residential areas. Figures - available via license: Creative Commons Attribution 4.0 International Content ...

Therefore, by installing a solar energy system with an area of 115 m 2, operating for 150 days, a collection efficiency (?) of 0.436, and a heat loss efficiency (T) of 0.02, in a ...

We find that the electricity generation potential of installing rooftop PV in the old residential buildings in the study area would meet about 17.7-20% of the residential electricity ...

The study results revealed the following: (1) The floor area ratio (FAR), building density (BD), average building height (ABH), and space layout (SL) exerted substantial influences on the solar ...

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