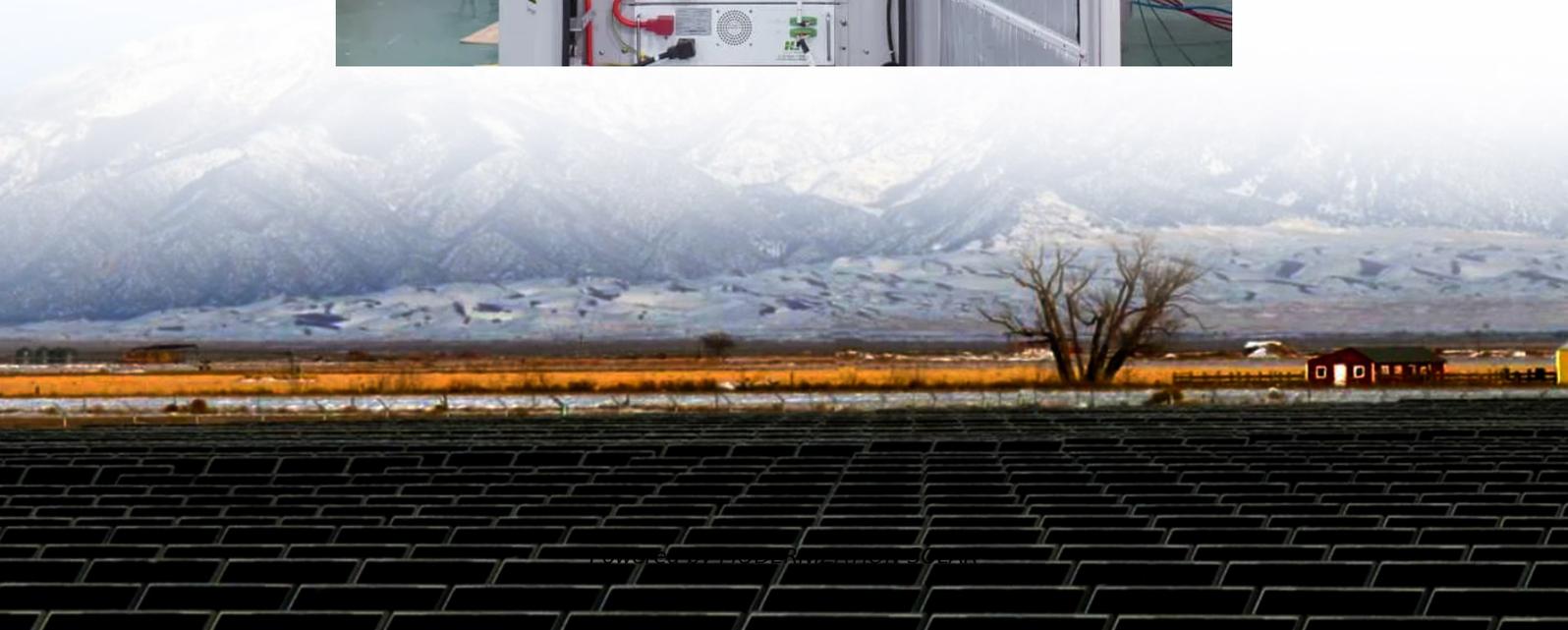


Modular design of solar curtain wall facade





Overview

Can a prefabricated modular façade solution reduce energy consumption?

The current research presents the design and development of a prefabricated modular façade solution for renovating residential buildings. The system is conceived as an industrialised solution that incorporates solar harvesting technologies, contributing to reducing energy consumption by employing an “active façade” concept.

What is a modular façade system?

modular façade system. to any distribution and size of windows in the building, whether regular or irregular. However, this system is more suitable for flat façades than for those with balconies. The thickness of the modular façade system is significant, therefore reducing the useful surface area of these elements. Its design adaptable.

How can a curtain wall system increase solar power in tall buildings?

Increasing electrical generation and solar potential of tall buildings can therefore be attained by manipulation of the geometry and other design features of the facades, subject to visual and functional constraints, such as window design and positioning. A curtain wall system represents an efficient way to integrate photovoltaic modules.

What is a ventilated solar facade?

The ventilated solar facade allows for quick and easy installation, inspection, and reuse, both in new buildings and renovations. Curtain Wall: In this case, the solar panel systems are fully integrated into the building envelope and replace spandrel, mullions, transoms, or vision glass panels.



Modular design of solar curtain wall facade



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Facade solutions/curtain walls

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