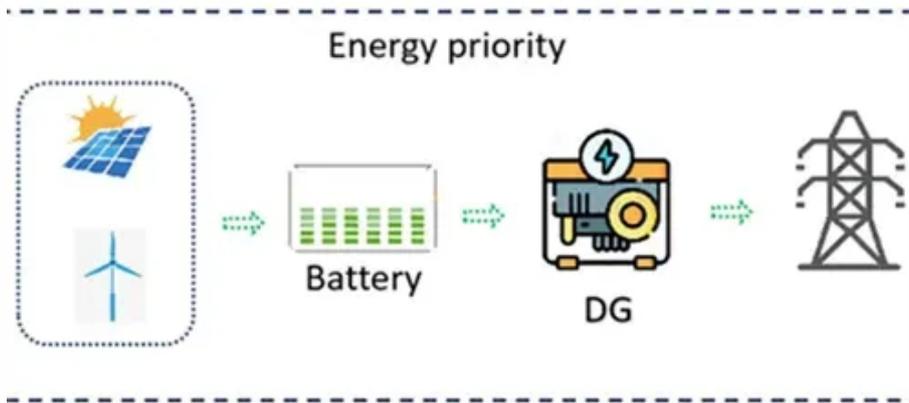




# Flexible photovoltaic support wind resistance system





## Overview

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The main objective of this paper is to provide a comprehensive review on the state-of-the-art studies focusing on the aerodynamic characteristics and wind-induced response of flexible PV system. Traditional rigid photovoltaic (PV) support structures exhibit several limitations during operational deployment. Therefore, flexible PV mounting systems have been developed. This study employs a vision-based, durable, and sustainable PV power generation system. It has the advantages of large span, fast construction speed, and can adapt to complex environments.



## Flexible photovoltaic support wind resistance system



### [Photovoltaic support wind resistance measures plan](#)

Wind-induced response and critical wind velocity of a 33-m-span flexible PV modules support structure was investigated by using wind tunnel tests based on elastic test

### [Study on mechanical properties of a 35-meter-span three ...](#)

The above research shows that the existing flexible photovoltaic support system has some shortcomings, such as poor stiffness and insufficient wind resistance, which also limits its use.

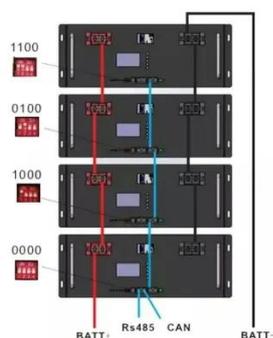


### **Improvement of the flexible support photovoltaic module system: A ...**

The flexible support photovoltaic module structure system has advantages such as large span, fast construction speed, and suitability for complex environments. However, this kind of system has the ...

### **Instability mechanism and failure criteria of large-span flexible PV**

This paper presents a systematic work around the wind-induced response and instability characteristics of the large-span flexible PV support array, the results are of significance for the ...



## Comparison and mechanism analysis of wind-induced vibration ...

These findings provide insights for wind-resistant design optimization of flexible PV supports.

## [A Review on Aerodynamic Characteristics and Wind-Induced](#)

The main objective of this paper is to provide a comprehensive review on the state-of-the-art studies focusing on the aerodynamic characteristics and wind-induced response of flexible PV ...



## Experimental investigation on wind loads and wind-induced responses ...

In this study, a 45 m span flexible PV support structure with 3 spans and 12 rows was designed. The wind loads on PV panels were obtained by wind tunnel tests on a rigid model and the ...

## Static and Dynamic Response



## Analysis of Flexible Photovoltaic ...

This research focused on the safety and critical wind speed of flexible PV mounting structures, as well as the calculation of wind-vibration coefficients, and proposed reinforcement ...





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