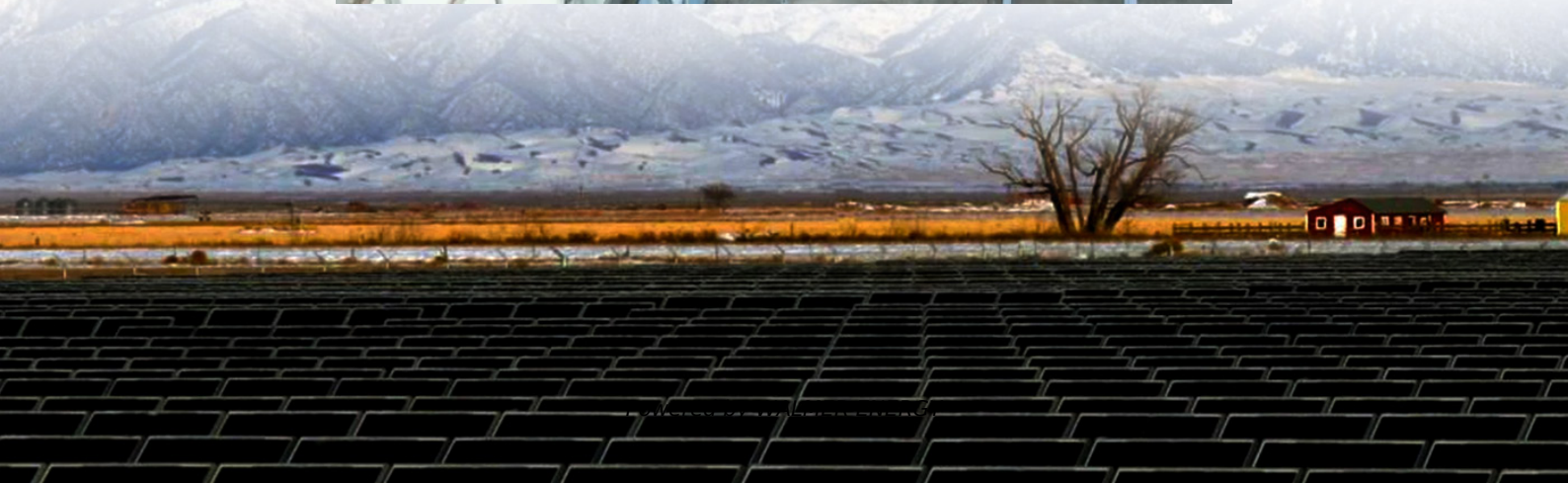


Cost Analysis of High-Efficiency Solar Containerized Solar Powered Vehicles





Overview

How a high-efficiency solar system can be used for automobile applications?

According to our survey, the use of more than 30% of high-efficiency PV enables 30 km per day driving without external charging and the society that the majority of the family cars run by the sunlight and without supplying gas. Thus, we are developing high-efficiency and low-cost solar cells and modules for automobile applications.

Do high-efficiency solar cell modules increase driving distance?

Although developing high-efficiency solar cell modules has been shown to be very effective in order to develop attractive PV-powered vehicles, quantitative analysis for the impact of high-efficiency solar cell modules upon an increase in driving distance, reduction in CO₂ emission, and total cost reduction are necessary.

Can low-cost solar cells be used for PV-powered EVs?

To develop high-efficiency or low-cost solar cells and modules applicable to PV-powered EV, Japanese researchers have reviewed the applicability of various types of solar cells and presented the expected cost reductions or effects [11, 12].

Why are high efficiency solar cell modules important?

Because the roof area of passenger cars is quite limited, the development of highefficiency solar cell modules is very important in order to increase VIPV peak power and driving distance of PVpowered vehicles.



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