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Help Received: None

ME-444 Senior Design Web Summary

The objective of this research was to determine the economic feasibility of using solar tracking photovoltaic systems as compared to using a fixed system for small-scale urban and suburban applications. To conduct this study a dual-axis solar tracking photovoltaic system was designed and built with emphases on structural integrity and utilization of low-cost components. Using this dual-axis solar tracker the benefits of a solar tracking system over a fixed system were experimentally determined. This was used to calculate a differential rate of return between the two systems. It was found that purchasing and using a dual-axis solar tracker instead of a fixed system produces a differential rate of return of -13.1%. This research's conclusions indicate that for small-scale use solar tracking systems are not economically viable.

