

# **The Case for a Single-Axis Tracking Solar PV Array System to Mitigate against the Time-of-Use Tariff**

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## **Abstract**

The Time-of-Use tariff is designed to discourage the use of electricity by commercial customers during peak demand periods with the morning peak tariff operating from 7:00am to 10:00am during weekdays. The evening peak demand period with the evening peak tariff is from 6:00pm to 8:00pm. A fixed-axis PV system generates peak electricity when the sun is overhead of the PV array. A single-axis PV tracking system allows for maximum production of electricity by tracking the sun soon after it appears and disappears over the horizon. This paper will discuss, using an actual case study of a public entity, the attractiveness of implementing a ground mounted single-axis PV tracking system to maximise electricity production and to mitigate against the morning peak Time-of-Use tariff. The CSIR's 560 kWp, ground-mounted, single-axis PV tracking system on its main campus in Pretoria will also be discussed as a reference against which to compare small scale PV projects.