

## **Prospects of using solar Energy in Mining and Minerals processing industry**

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### **Abstract**

The current market for minerals commodities such as phosphate, oil shale, and cement is very competitive, and the main goal of any project is to reduce the production costs in order to be competitive in the market. One of the key factors that contribute significantly to the production chain is the cost of energy. In Jordan these projects were located in remote areas with a plenty of sunshine almost throughout the year, therefore there are opportunities to utilize electricity from solar energy either by traditional photovoltaic (PV) technology or by more advanced technologies such as concentrated photovoltaic cells (CPV) or solar concentration collectors such as parabolic troughed collectors (PTC). In this paper a general overview of these technologies will be given. A worked example evaluating the cost of energy in a proposed minerals processing circuit showing the prospects of using solar energy will also be given.

Keywords: phosphate, oil shale, cement, solar energy, collectors