**Performance of PV Street Light due to Dust Accumulation in Arar City**

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Northern Border-KSA has a great solar potential, so a good chance to investigate in solar energy. Unfortunately, Photovoltaic (PV) power generation performance due to the big amount of dust storms in KSA in general and specially the northern Border region is affected by surface soiling, the street lighting PV panels affected severely by accumulated dust in its surface. In this paper, ambient dust was measured for three months and the impact of dust accumulatio on the PV surface is measured and cleaning period is optimized. According to the results of this study, it is found that dust accumulation on PV panels can cause a severe loss in street lighting PV power generation.