

The Application of PV systems in Libyan Schools

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Abstract

Libya is one of the largest oil producers in North Africa. Most of the country relies on the oil-based energy economy, furthermore, it is one of the countries that recently struggles to satisfy the increasing energy demand. With the growth of demand for oil and gas in addition to the negative environmental impacts associated with global warming, it is a must to look for more reliable and sustainable alternative energy sources. Fortunately, Libya has a high potential for renewable energy, solar energy in particular. In this paper, we study the implementation of PV systems on Libyan schools' rooftops either to sustain itself or inject the energy generated to the grid. The idea behind the schools came from the fact that most of the public schools have almost the same rooftop area and distributed all over the country, along with embedding the renewable energy in the curriculum to encourage the consumption of electricity for students who are the most effective generation socially, applying that will increase the job opportunities in PV field and education is an ultimate start. This study focuses on public schools and takes the El-Aaid El-fathi school in Benghazi as a case study. After that, the total energy that can be generated has been determined for this case study by about 168MWh per year and then the result generalized on the public schools in Libya that reaches to about 504GWh yearly that will save 309 k number of oil barrels.

Biography:

Electrical Engineer with 2-year working experience in a renewable energy field in Tatweer research. Primary focus on specific research on solar energy technologies implementation and development in Libya. She has published two conferences papers and she is preparing two conference and journal papers

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