

**A REVIEW OF SOLAR POWER, DESALINATION TECHNOLOGIES, PRE-FILTRATION, POST-TREATMENT AND ENERGY RECOVERY IN DESALINATION – SUSTAINABLE DESALINATION PLANTS**

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**ABSTRACT**

*Due to population growth, there is an increasing demand for alternate supplies of potable water. Desalination technologies provide an effective solution to meet water demands by purifying saline water. Desalination systems have become popular in developed countries and show promise in rural areas when combined with renewable energy sources. This paper presents a review of solar power, desalination technologies, pre-filtration, post-treatment and energy recovery in desalination, and sustainable desalination plants. A critical analysis is conducted of the design of a photovoltaic (PV) stand-alone desalination system, particularly focusing on its solar power components, reverse osmosis desalination technology, pre-filtration, post-treatment and potential energy recovery devices.*

**KEYWORDS:** *Desalination, Solar Power, Reverse Osmosis, Energy Recovery*

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