

عنوان مقاله:

Seawater and brackish water desalination using renewable energy sources: Review and state-of-the-art

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خلاصه مقاله:

Water shortage and environmental problems are becoming worse and worse. The growing scarcity of freshwater is driving the implementation of seawater and brackish water desalination on an increasingly large scale. However, the energy required to run desalination plants remains a drawback. Today, current desalination methods require large amounts of energy which is costly both in environmental pollution and in money terms. The idea of using renewable energy sources that are considered as part of clean energy is fundamentally attractive and many studies have been done in this area. This paper presents a review of the highlights that have been achieved during the recent years and the state-of-the-art for most important efforts in the field of desalination using renewable sources of energy like solar, geothermal, wind and wave which could be used in Iran. Finally, some general guidelines are given for selection of desalination and renewable energy systems and the parameters that need to be considered. Renewable energies are expected to have a flourishing future and an important role in the domain of brackish and seawater desalination

کلمات کلیدی:

seawater and brackish water desalination, renewable energy sources (RES), solar energy, geothermal energy, wind energy

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