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REVIEW OF WATER PURIFICATION SYSTEM FOR REMOTE AREAS UTILIZING ULTRAVIOLET STERILIZATION AND PHOTOVOLTAIC'S

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Abstract

In order to be safe for consumption, the water has to be purified. The water purification design focus on providing a pure drinking water at low cost with high reliability. This work involves the research, design and manufacture of water purification system using renewable energy for remote areas. Present work is based on review of drinking water Purification and a combination of solar pasteurization, reverse osmosis (RO) and ultraviolet (UV) lamp sterilizer system with power supplied by photovoltaic (PV) modules, based on cost, ease of use robustness and effectiveness. Review is mainly based on the recent literature, research papers available on this technology. The general approach is to outline the issue and the problems followed by approaches. The system included power supply components, piping, filters, a fail safe shut off valve, storage tank for initial and final storage . The paper will be helpful for those who are working in the area of water purification system and their use in remote areas.

Keywords : Reverse osmosis system, photovoltaic, solar pasteurization.