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| |  |  | | --- | --- | | **Solar panels vs. evacuated tubes** | [Minimize](javascript:__doPostBack('dnn$ctr26097$dnnVISIBILITY$cmdVisibility','')) | |
| Ever since load shedding hit in January 2008, topics that were far removed from the public's mind suddenly became important. For convenience's sake, many households started to appreciate the sustainable solutions alternative energy sources provide. With an energy crisis that has the potential to cripple the economy, the media quickly took up its role as educator in alternative energy. However, because alternative energy is not a topic that has always received media attention, many journalists were, and still are, in the dark when it comes to alternative energy solutions.  In the solar water heating industry the benefits of evacuated tube systems are often weighed up against solar geysers that use solar panels. The media in general seems to think that evacuated tube systems are a better choice because the solar hot water from evacuated tube systems is generally hotter than the water in other systems.  What a lot of people, including the media, don't realise is that the efficiency of a solar system, whether it's an evacuated tube system or flat panels, is relative to various factors. These include the amount of solar radiation, whether it's a direct or indirect system and the location of the system.  What's more, the performance and durability of the entire system needs to be taken into account, not only the efficacy of the collectors. Consumers need to consider factors such as safety, the quality of the tank, heat retention and continued overall performance.  Although evacuated tube systems may be well suited to certain climates, this is not necessarily the case in South African conditions. The South African annual solar radiation value is somewhere between 1 450 and 1 950 kWh/m2 per annum, compared to an annual average of 910kWh/m2 in Europe. In the case of evacuated tube systems, especially in pre-feed systems where the hot water is pumped directly into an electric geyser, water that is too hot has the potential to cause damage and, in extreme cases, explosions, due to the excessive pressure.  Although many solar geyser manufacturers that rely on solar panels have products that can heat water as much as evacuated tube systems, those panels aren't installed in South Africa because of the radiation and the subsequent risk of damage to the system.  The matter of heat loss should also be considered. Heating water to boiling point is one thing. Ensuring that the water stays warm over an extended period without sunlight or electricity is an entirely different matter. The collector panels have nothing to do with heat retention. A properly insulated tank is needed to retain heat.  Furthermore it is of pivotal importance that you are sure of the after sales service that you will receive when buying a solar water heater, regardless of the system you purchase. Always do careful research into the companies you're considering. Pay special attention to accreditation and warranties. Companies that are part of the Eskom DSM programme are reputable companies that have to comply with certain standards. You will also receive cash back from Eskom if you get your solar geyser form one of these companies. |