

# **Exploring the possibility of the insurance industry as a solar water heater driver in South Africa**

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## **Abstract**

South Africa faces severe electricity shortages. Most of the electricity generated is from coal, which contributes to climate change.

Water heating is a major consumer of electricity. Solar Water Heaters (SWHs) can alleviate these problems but has a low penetration in South Africa.

Most hot water in South Africa is heated by standard electric geysers. Most of these geysers could be replaced by SWHs. The insurance industry is responsible for the procurement and installations of more than 75% of replacement geysers and almost 50% of all standard geysers sold in this country. Geysers are insured on homeowner's policies and 70% of claims on these policies are geyser related.

This paper makes an argument that the insurance industry can exploit this opportunity to introduce SWHs when a water heater must be replaced and help to jump start the SHW uptake.

It was found that the SWH programmes running through insurance industries at present are not being taken up by policyholders. It was found, however that this is mainly due to entrenched systems and false perceptions. These systems and perceptions are able to change through the will of the insurance sector to the benefit of all.

## **Introduction**

South Africa is facing an energy crisis on two levels: the existing electricity supply is not sufficient for future growth in demand and the electricity (Creamer 2010) which is produced comes mostly from coal fired power stations (IEA 2007) with resultant emission problems.

One renewable energy solution which is easy to roll out is Solar Water Heaters (SWHs). It is an established and proven technology which has the potential to have a big impact on the electricity capacity problems which the country is facing (Ijumba et al 2009). SWHs can be used in a variety of applications from industry to households and the roll out of SWH programmes is also completely scalable.

The SWH industry in South Africa is in its infancy and comprises far less than 10% of total hot water solutions sold (Schultz 2010; Worthmann 2010). The awareness of SWHs is however growing amongst the general public. Sales are starting to pick up due to, amongst other reasons, the higher electricity prices and government subsidies offered through the electricity supply company, Eskom.

The rate of change, however remains disappointingly slow. Continuing in a business-as-usual model will most likely not result in any appreciable penetration levels. Therefore a radically different approach needs to be adopted.

Most of the hot water in South African homes is heated by electric resistance heating in standard geysers. Most of these electric geysers can be replaced by SWHs.

It is most likely that a building regulation enforcing energy efficient water heating in new buildings will be in place by mid 2011 (van der Merwe 2010). This regulation is however unlikely to cover the overwhelmingly larger number of geysers replaced due to failures (Cohen 2010).

## **Research methodology**

In this study, a series of interviews were conducted with representatives from the insurance industry as well as a range of other SWH industry stakeholders and consumers. This study sought to establish the opportunities as well as possible barriers for the creation of SWH programmes within the insurance sector. In addition it sought to determine the barriers to the uptake of SWHs by policyholders in the cases where insurance companies do have SWH programmes in place.

## **Results**

A number of issues transpired during the interviews conducted. These issues strongly support the hypothesis that the South African insurance industry has the capacity and opportunity to drive the penetration of SWH technology.

Geysers are insured on homeowner's policies and 70% (Aquisto 2010; Addison 2010) of claims on these policies are geyser related. If a standard electric geyser fails and the homeowner has comprehensive homeowner's insurance, the geyser is quickly and efficiently replaced by the insurer with a minimum pay in and minimum inconvenience for the policyholder. More than half of all geysers sold in South Africa are for the replacement market (Schultz 2010, Roux 2010). Most of these geysers are procured and installed via the insurance industry. As this is the case, the insurance industry has a great opportunity to get involved in an energy saving and carbon reducing programme by convincing their policyholders to change to a SWH in the case of a failed geyser.

If a policyholder changes to a SWH at point of geyser failure, the capital cost of the SWH is not only significantly subsidised by Eskom, but in addition effectively subsidised by the insurance company to the value of the failed geyser. The installation of a SWH in place of a standard geyser in a home should significantly reduce the future electricity use of the homeowner, making up for the extra initial capital cost. This future electricity saving can in addition be seen as a great and ever escalating return on their capital investment. The value of the SWH will in addition not be reduced to zero as the unit should be resalable at a reasonable price. If the SWH should fail, it will be serviced by the installer while under guarantee and replaced by the insurance company by default once the guarantee period has run out. The Eskom subsidy could furthermore be administered by the insurance company, thereby further reducing the short term capital outlay to the policyholder. As the SWH will reduce the carbon emissions of the household, they should also be able to acquire future monetary rewards through carbon schemes. The point of geyser failure is a great time for any homeowner to change to a SWH as the system in use is no longer working and needs to be replaced. The replacing of a failed geyser with a SWH is in fact such a good deal from the perspective of the policy holder that they should be looking forward to the failing of their geysers.

As insurance companies are risk managers, they will be forced to bear the brunt of losses due to climate change. They should thus do everything in their power to lower the greenhouse gas (GHG) emissions of not only their in-house operations, but also the GHG emissions of the hardware offered and installed for their policyholders. In addition, it is

becoming more important for companies to not only report on financial success, but also on social and environmental impact.

Having a SWH programme running at point of claim could be used as a carbon offset project for the emissions of the insurance company due to the reduction of GHG emissions of the policyholders. This reduction of GHG emissions could in addition be used as offset for future carbon taxes. The insurance company might also be able to attain a higher score for the Carbon Disclosure Project run by the National Business Initiative, with resultant positive publicity. If the SWH is installed on the rooftop of a policyholder, there will be no resultant damage should the unit fail, thus reducing the claims risk. SWH are in addition thought to be of higher quality than standard geysers and often carry a longer manufacturer's guarantee further reducing the risk to the insurer. A successful SWH programme run by an insurance company is in addition a great feel-good marketing tool which might even have the result of increasing market share.

As the insurance industry procure and install almost half of all standard geysers in South Africa, the impact of a successful SWH programme run through them will have a significant impact on the reduction of peak load demand of electricity in the country. The increase penetration of SWHs due to such a programme will further reduce electricity base load demand as well as the GHG emissions of the country. Such a programme will in addition assist the government in achieving their target of 10 000GWh from renewables by 2013 as well as achieving the installation of 100 000 SWHs by 2014.

There are two SWH programmes running through insurance companies at present. South Africa's leading insurer, Santam, has had a SWH programme running since February 2010. Not many SWHs have been installed via this programme (Genis 2010). The insurance arm of one of South Africa's leading banks, Absa, has embarked on a SWH pilot programme in June 2010. The SWHs are only offered to customers in Cape Town. The uptake for this programme has been just under 2% (de Ridder 2010).

The high upfront cost for a SWH as well as the longer installation time have been cited by some as possible reasons for the non-uptake of these offered SWHs. Additional barriers are the apparent consumer mistrust of the technology as well as the aesthetics of SWHs on residential buildings. In addition, some consumers seem not to believe that they would qualify for the Eskom subsidy while others apparently do not believe that they will incur electricity savings. A significant number of policyholders appear not interested in the offer without any reason given. Most of the claims lodged at Santam are in addition done so by insurance brokers and it seems as if the message of the offer does not get relayed to the policy holder.

Most of these barriers are seated in the perceptions of the policyholders and in entrenched systems. SWH technology is not yet known in South Africa and as such still has a very low penetration level. As the insurance sector in South Africa is not only responsible for the installations of almost half of all standard geysers, but in addition could significantly gain from a successful SWH programme, it is paramount that they do all in their power to establish a successful SWH programme. It seems as if this will only be able through a complete change of the system, from procurement, through to administration of claims. The learning curve in setting up such a programme might cost the company some money at first, but this should be outweighed by the future benefits. The insurance sector has an opportunity here to have a major impact in the GHG emissions of this country.

Insurance companies spend vast amounts of money on extensive advertising campaigns and sponsorship of major sporting events. It is noteworthy that no similar investment in respect of SWHs or environmental awareness in general has been undertaken so far. One must also consider that this massive investment goes into the advertising of policies and products that people already know about. It would therefore be reasonable to infer that up till

now SWHs (or environmental sustainability in general) do not appear to be regarded at the same priority level by the South African insurance industry as their traditional policies and products. This offers a great opportunity for improvement. For example, the number of consumer perceptions cited above, which has contributed to the low SWH uptake, is evidently due to a lack of consumer awareness and education. In order to accelerate the installations of SWHs in general in the country, much more consumer awareness and education is needed. With a concerted and serious effort from the insurance industry a SWH could be the hot water solution of choice soon. These could be coordinated to augment existing and future government programmes.

This author learnt through this research that one of the few attempts to promote solar water heaters is through insurance company call centre operators (Genis 2010). These operators have been extensively trained to offer a SWH when a geyser claim is lodged. It became quite apparent from the investigation that the selling of the idea needs to happen sooner. The call centre operators are not sales people and therefore not in the position to sell the SWH programme to the policyholders. Many of these claims are in addition lodged by insurance brokers and not by the policyholder themselves. It seems as if the offer of these SWHs to the brokers might not be relayed to the policyholders. As SWH technology has a very low penetration in South Africa and is still an unknown technology, not many insurance brokers or policyholders phoning in can see the benefit of a SWH installation. When the additional capital outlay is mentioned, this might be seen as a cost and not the investment that it is.

By the time that the claim is lodged, the policyholder should already be aware of the offer and he/she should already have been convinced of the benefits of changing to solar. This will only be achieved with extensive marketing campaigns on radio, television and the print media highlighted earlier. Direct marketing to policyholders through emails or offers via the brokers could in addition be considered. The insurance industry is notoriously good at selling policies. This same marketing skill should be harnessed and used in the selling of SWH programmes to the policyholders. Such a marketing campaign, if cleverly designed and if the company can deliver what is offered, could even have the added benefit of selling more policies.

Apart from the rising electricity tariffs, the anticipated national building regulation to be put in place next year could help in increasing awareness and knowledge about SWHs.

Finally, the active promotion of SWHs by all concerned parties should be first on the agenda. Government, Eskom, Energy Efficiency and renewable energy industry bodies, financial institution and the insurance industry should all work together at promoting the installations and use of SWHs. They should in addition work together at putting the logistics in place to cater for the expected increase in demand.

It is to the advantage of the insurance industry to start putting mechanism in place for this change, but it is also the responsibility of individual policyholders to start insisting on the change to SWHs.

## **Conclusions and recommendations**

Although there are no successful SWH programmes running at present in the insurance industry, there seems to be a great deal of interest by most major insurers to put programmes in place. In addition, for the SWH industry to take off in South Africa it appears that major consumer education and commercial advertising campaigns will be necessary. With large marketing and advertising budgets, the insurance industry seems to be uniquely placed to drive such campaigns.

Changing to a SWH at point of geyser failure is an opportunity for the insurance industry to take responsibility for their own systems and work towards a better future for all. Not only should such a successful programme benefit the policyholders, but it should benefit the insurance industry itself as well as the country as a whole.

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