

A Carbon Catch-22

To keep one electric geyser hot for one year takes 1 ton of coal (burned to generate the electricity).

The National Development Plan calls for 50% of homes to have solar water heating by 2030.

In 2020, only one million homes have fitted solar water heaters. That is ten percent of the 11 million homes in South Africa. So there are another 4.5 million to go – in the next ten years.

An impossible dream?

One problem is that most of the one million solar water heaters installed to date have been government freebies. This has created a disincentive – homeowners don't want to buy when they think they too can get one free, if they wait.

The Energy and Water SETA has trained thousands of installers, but they are standing idle. To the extent that this is no longer considered a "critical skills shortage".

Worse yet, many manufacturers of the devices are going out of business. Factories are closing down. Not enough demand.

This is an abomination in an age of high youth unemployment, load-shedding (a sign that Eskom cannot keep up the supply of electricity) and environmental pressure to burn less coal.

Fitting 4.5 million devices onto rooftops should be a booming business, for the next ten years. And after that, there will still be another 5.5 million homes to convert to solar.

If there was ever a "silver bullet" to reduce pull on the Eskom grid – this is it!

If we could convert those 4.5 million homes this year, that would reduce the amount of coal burned every year thereafter by 4.5 million tons. Think of how much cleaner our skies would be! Greta Thunberg would be ecstatic!

What is the bottleneck? The short answer is CREDIT.

There is a plan on the table. It is based on the way marketing works. If you want to buy a Ford car, the Ford Credit Corporation will loan you the money. Sign the purchase agreement, then sign the loan agreement. You can drive away your new car, as long as you keep up your monthly payments.

The plan is to create either "Solar Stokvels" or better yet "Cooperative Banks" that strictly lend money to homeowners, and strictly for conversion of electrical geysers to solar.

Right now, homeowners are paying about R200 per month to heat their domestic water using electricity. The plan is to double that monthly amount to R400 – and to pay that for 60 months into the savings club. For every 200 homeowners that do this, two trained solar fitters can be employed full-time for the whole 5 years. By the end of the 5 years, all 200 homes will be converted to solar. Remember that as soon as your house is converted to solar, you won't have to pay that R200 electricity bill!

Unemployed youth who have been trained to fit solar water heaters have to stand around waiting for a call to install one. One by one. Their enterprise is totally reactive.

A stokvel or cooperative bank can turn that around to be proactive. Homeowners keep up their monthly payments, just like buying a Ford car. So that house by house, the electrical geysers can be decommissioned and replaced with clean-energy water heaters. Eskom will heave a sigh of relief and global warming will slow down.

But this CREDIT is not provided by the Ford Credit Corporation. It is engineered by a local stokvel or cooperative bank. If you miss your payment, you will not get phone calls from Ford. Your own neighbours will be visiting you to pinch you to keep up your end of the bargain!

This plan is really good for youth unemployment. It can hugely reduce our carbon footprint. It will alleviate Eskom, and you will never have to take a cold bath because of load-shedding again!

But it won't work without Self-Help Development at community level. Homeowners need to be organized and that won't happen spontaneously. Development always needs facilitation.

Installers can organize themselves as cooperatives, or as enterprises, or it can happen by youth mobilization by NGOs. No matter. The key to open the gridlock is CREDIT.

The same mechanism could also apply to rainwater harvesting, to increase the retention of water by each household. In fact, this Vision could see the emergence of Credit Unions at community level, to replace banks that are inflexible and expensive. Mohammed Yunus, founder of the community banking system called Grameen Banks, once said: "The banks ask: Are the people credit-worthy? We ask: are the banks people-worthy?"

There is a plan to solve this Carbon Catch-22. We have all the ingredients, but they are in "silos". One entity offers Training. Another offers Hardware. Another offers Credit. Another offers Environmental Protection. But they are not wired together... while Coal burns.