



MY GREEN HOME

GUIDE TO SAVING MONEY BY GOING GREEN

TEXT BY DON BOROUGHS



Join the family that changed their home to help change the world

IF YOU'RE BUILDING A NEW HOME . . .

Make it a certified green home by using the green building rating tool called EDGE all the way from the design through the construction process. It will also help you calculate upfront costs and potential long-term savings. The EDGE residential tool is available on the IFC website www.ifc.org/edge. **Contact the Green Building Council SA on edgepilot@gbcsa.org.za if you wish to have your home certified.**

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INTRODUCTION

Are you concerned that your household is adding to environmental problems and contributing to climate change? Are you looking for a way to reduce your spending on electricity and water? Or maybe you want to be less dependent on the electricity grid?

Whatever your reasons, this guide and the lessons of the 'My Green Home' family are for you. The Green Building Council South Africa, with co-funding from the German government and a set of sponsors and partners, spent six months working with one suburban family to green their home and show what is possible.

In that short time, Zwelethu and Bulelwa Ngewana and their children, Lutholuthle (17) and Thulisa (22) saw:

53% ELECTRICITY CONSUMPTION

44% WATER CONSUMPTION

81% WASTE TO LANDFILL

By acting on the ideas in this guide, you can make a difference too.

BUT I DON'T HAVE TIME . . .

It's true, sometimes doing the greener thing takes time, but often it doesn't. Taking a short shower instead of a long shower or bath can save many hours of your time and thousands of rands in the long run. We'll show you three things you can do in the short term that would save a family like the Ngewanas about R4 500 in a year.

BUT I CAN'T AFFORD IT . . .

You will start saving right away with some of our 'No-Cost' suggestions. Or, you can start investing in some of our suggested 'Low-Cost' greener technologies. Some of these can pay for themselves in less than a year and continue paying you dividends in lower utilities. Work your way up to our Invest-to-Save ideas that can pay major returns over time. The Ngewanas will save nearly R18 000 in the coming year. Can you afford *not* to start saving?

THREE SHORT-TERM WAYS OF SAVING MONEY

Understand your consumption and costs	Do an eco-audit	Set your goals



'MEET THE FAMILY' WEBISODE

Visit <http://mygreenhome.org.za/webisode/meet-the-family/>

SEE 4 MINUTE SUMMARY WEBISODE:

Visit <http://mygreenhome.org.za/>



1

GREENING YOUR HOME: WHERE TO START

- Understand your consumption and costs
- Do an eco-audit
- Set your goals

What's your appetite for greening your home? Hungry for the full-course meal? If you want to monitor your progress, count your savings and educate the family at the same time, just like the Ngewana family did, start here. You'll learn how to measure your home's consumption and create an easy eco-audit. Just want a nibble? If you would rather jump in and make a change here and there, you can skip ahead to the next section: No-Cost.

UNDERSTAND YOUR CONSUMPTION AND COSTS

To set goals and monitor your progress, you first need to know how much electricity and water you have been using, and how much waste you're generating – your baseline. Gather your last 12 months of water and electricity bills, purchase receipts or purchase history. You are not looking for rands, but rather kilowatt hours of electricity (kWh or "units") and kilolitres (kL) of water. Add up your one-year total of each, taking note of how consumption shifts with the seasons. It's good to have a record of a few different baselines:

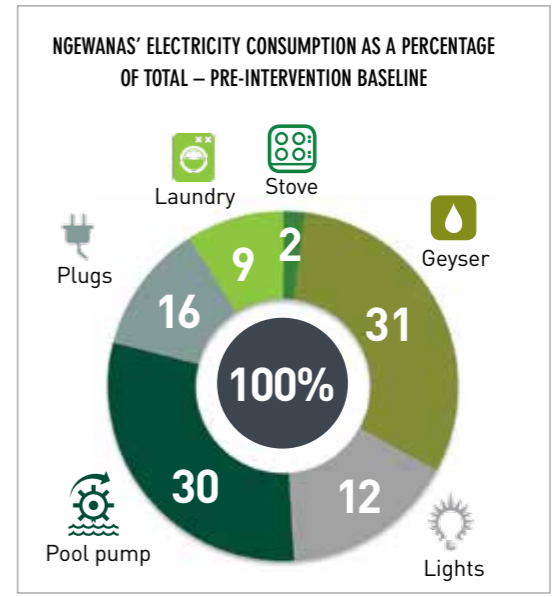
- The annual total
- The monthly average by season
- The daily average (divide by 365)
- The kWh/m²/year number

This last number is great for comparing one home with others of different sizes. Want to know how you measure up with the Ngewanas? In 2013, they used 41 kWh/m²/year.



'WHERE TO START' WEBISODE

Visit <http://mygreenhome.org.za/webisode/where-to-start/>



The Ngewana family set these goals:

-40% ELECTRICITY CONSUMPTION

-20% WATER CONSUMPTION

-75% WASTE TO LANDFILL



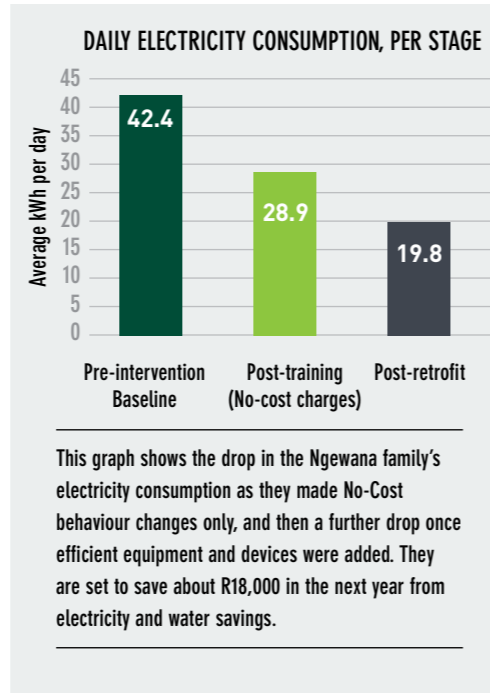
ELECTRICITY COSTS:
Before (March)
R1500
After (Sept.)
R671

They figured this out by dividing their kWh total for the year by the size of the home's usable floor space in square meters. My Green Home has a guide for calculating your kWh/m²/year number or you can use 49M's online calculator even if you only have your kWh info for one month.

DO AN ECO-AUDIT

The Ngewana family had the benefit of eight electricity meters installed to monitor every segment of their consumption and a professional consultant to help them with an eco-audit.

The resulting pie chart on page 3 shows where electricity was being used in their home. Do your own by following the instructions from page 65 of the Cape Town Smart Living Handbook. Or you can leave the calculations to Eskom's online



Comprehensive Energy Audit Calculator. When you're finished, a pie chart shows how much electricity in your house goes for lighting, geyser, kitchen, laundry, pool, etc. You will also see suggestions for where you can save.

SET YOUR GOALS

Once you know how much water and electricity you consume, you can set savings targets.

Sound ambitious? We believe that over time any household able to follow most of the No-Cost, Low-Cost and Invest-to-Save ideas on the following pages can meet and even exceed those goals. The Ngewana family did.

- R670** monthly savings on water
- 26%** reduction in water use through behaviour changes
- 63** LIGHTS UPGRADED TO LED
- 12 kgs** RECYCLED OR COMPOSTED WEEKLY
- 32%** REDUCTION IN ELECTRICITY CONSUMPTION THROUGH BEHAVIOUR CHANGES ALONE
- 11** 9-kG gas bottles saved during winter heating
- 68%** savings switching to LED TVs
- 5.1** YEAR ANTICIPATED PAYBACK FOR THE SWH (GEYSER)
- 75%** reduction in energy for lighting
- 230 watts** GENERATED BY PV PANELS IN FULL SUN
- 29 KWH** GENERATED BY PV PANELS IN SEPTEMBER
- 4.4 tons** CO² saved over 6 months
- 300 watts** used by new pool pump vs. 620 W for old one



2

NO-COST ACTIONS

- Reduce the ironing pile
- Turn your geyser down to 55°C-60°C
- Don't work the pool pump overtime
- Keep your clothes out of hot water
- Take a short shower

Without spending a cent, the Ngewana family managed to cut their electricity consumption by 32 percent in one month, just through changing the way they did things. The pool pump was constantly left running for 24 hours during the baseline period, but even if the pump had been running normally, No-Cost savings would have been 27 percent. They also reduced water consumption by 26 percent and waste to landfill by 81 percent through recycling and composting.

They had the advantage of training sessions with a sustainability consultant to show them how to save, but any family that can act on the following five suggestions should be able to cut their electricity consumption by 20 percent or more.

TURN YOUR GEYSER DOWN TO 55°-60° DEGREES

Most electric geysers are set to a scalding 65° or higher. Every 5° drop in the thermostat setting saves about 10 percent on water heating.

First switch off electricity to the geyser at the distribution board for your own safety. For some homes, the geyser may need to be set at 60° in winter to provide enough hot water, but test to see if you can drop it to 55° for the summer. For detailed advice, see this DIY guide (<http://handytechtips.blogspot.com/2008/05/wheres-my-geysers-thermostat-how-do-i.html>) to adjusting a geyser thermostat.



If you would like to see more ideas, visit <http://mygreenhome.org.za/> for the longer, much more detailed guide.

It starts off small, by you making a conscious decision to make a change. It doesn't have to be something huge, but it does have to be something.
– THULI



60°

The geyser may need to be set at 60° in winter to provide enough hot water, but test to see if you can drop it to 55° for the summer. To prevent bacteria and possible diseases like Legionnaires', don't set it below 55°



Lutho Ngewana climbed into the roofspace and found their geyser set to 70°. He turned it down by 10°. This one action, combined with short showers (see below) helped the Ngewanas to reduce the electricity used by the geyser by 40 percent.



DON'T WORK THE POOL PUMP OVERTIME

Whoever told you to run the pump 8 or 12 hours a day doesn't pay your electricity bill. Such long run times could make your pool one of your biggest power users, as the Ngewana family found out. Research shows that 4 to 6 hours is enough in summer for most pools and just 2 to 3 hours in winter.



Zweli Ngewana usually had his timer set to 10½ hours. He brought that all the way down to 3 hours for winter and will try 4 or 5 in warmer weather. Even if he hadn't switched to a more efficient pump, reducing hours by making two seasonal timer adjustments alone would have saved him R2 500 in electricity. A pool cover can further reduce the number of hours needed, especially if it blocks the light. Every pool is different, so monitor it and adjust the hours if the water does not stay clear.

REDUCE THE IRONING PILE

A steam iron is one of the most energy-hungry appliances. The solution is not a higher-tech

iron; it's a smaller pile of ironing. Avoid pressing wrinkles that will never be seen anyway. Underwear, fitted sheets, pyjamas and exercise gear don't need the energy wasted on them.

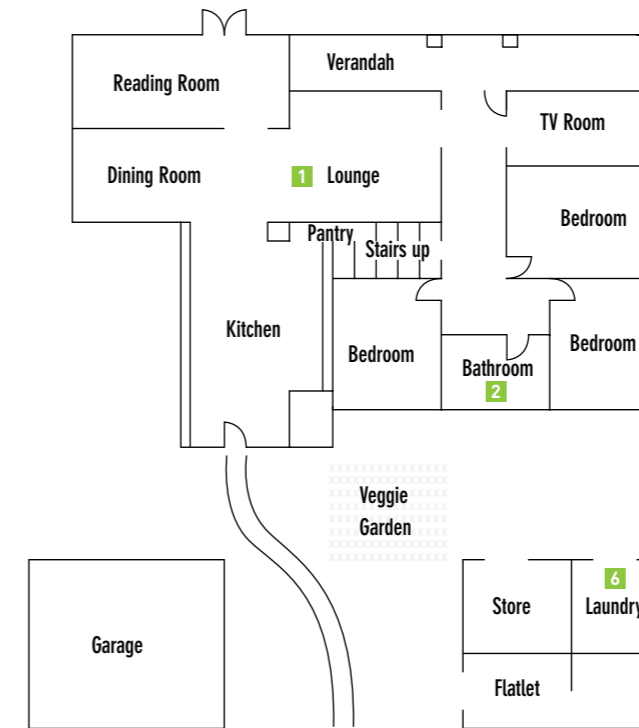
When the Ngewana family scrutinised their weekly ironing pile, only about a third of the laundry items really needed to be ironed.

KEEP YOUR CLOTHES OUT OF HOT WATER

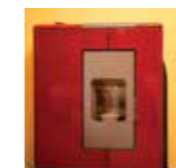
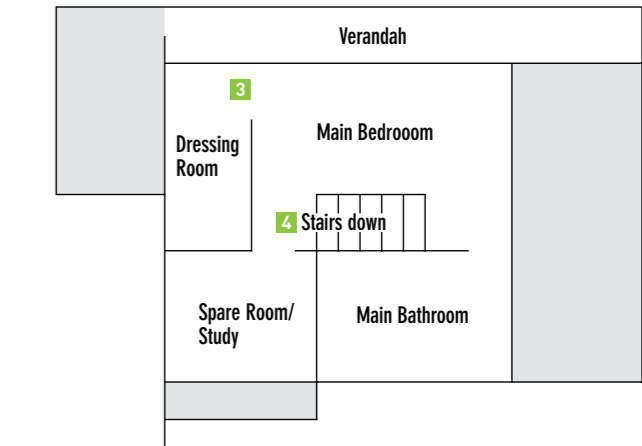
No matter which model of washing machine you own, selecting the coldest water setting will use just a fraction of the power consumed by a hot wash. Don't be surprised if your whites start to look whiter. That grey look often comes from colours that have bled in hot water.

TAKE A SHORT SHOWER

A bath typically uses 80 to 120 litres of water. A two-minute shower with a low-flow shower head uses at most 19 litres of hot water, consuming just a fraction of the water and energy needed for a bath or a long shower. That could save a few thousand rands worth of water and electricity per year for a family of four. The Ngewana family held a shortest-shower competition among the family members; Lutho's two-minute showers won.



SIZE OF HOUSE (ESTIMATES)
 MAIN HOUSE: 205 m²
 LAUNDRY: 13 m²
 TOTAL LIVING AREA: 218 m²
 GARAGE: 40.5
 STORE AND FLAT: 22.5 m²



1 LOUNGE
 A Calore Piazzatta closed-combustion fireplace was installed to replace the old open fireplace. This uses burning wood pellets made in South Africa from scrap wood and sawdust.



2 BATHROOM
 Kitchen and bathroom taps were replaced by aerated mixers and taps to reduce water consumption, and water efficient showerheads, with flow rates between 6 and 9 litres per minutes.



3 SAINT GOBAIN INSULATION
 The entire ceiling was insulated using fibreglass batts 135 mm thick, to a R-value of 3.38, locally manufactured from 80 percent recycled glass.



4 EUROLUX LIGHTS
 All bulbs replaced with Light Emitting Diodes (LED), including the external floodlights. Additional task lighting provided to kitchen and bedrooms.



5 WIZARD WORMS
 A small worm farm for the vermicomposting of kitchen fruit and vegetable scraps supplies both liquid 'worm tea' fertilizer and compost for the garden, while reducing organic waste going to the landfill.



6 GEYSER
 40% saving through 10° decrease in thermostat temperature and installation of a geyser blanket, coupled with shorter showers and shallower baths.

3

LOW-COST PURCHASES

- Replace your bulbs with LEDs
- Install a low-flow shower head
- Put heat where you need it
- Keep your greens in the garden
- Stay secure with motion-sensor lights outside

'It's become like an itch you have to scratch if some of the lights are on in a room when nobody is using it.'
 – THULI

Major investments like solar water heaters, heat pumps and variable-speed pool pumps yield some of the largest savings, but many kinds of green technology are affordable enough for limited budgets. In fact, some low-cost purchases — such as LED lights and low-flow shower heads — are obvious starting points when greening a house, with savings that will cover your costs quickly. At My Green Home, any investment less than about R1 000, including installation, counts as Low-Cost.

The Ngewana family made a range of low-cost additions to their home. The best five ideas are explained below.

REPLACE YOUR BULBS WITH LEDS

Light-emitting diodes (LEDs) are the lighting of the future, but you can start saving with them today. Though still relatively expensive, they are much cheaper than in the past and can often pay for themselves in less than a year. In fact, our calculations show that investing R100 in a 7 watt LED to replace a 50 watt halogen downlight that is turned on 5 hours a day pays such good dividends that it's like earning 32 percent annual interest over 5 years.



SEE LIGHTING WEBISODE:

visit <http://mygreenhome.org.za/webisode/lighting/>

ONE DOWNLIGHTER

Halogen watts	50
LED watts	7
Savings	43
Hours per day	4
Savings/yr kWh	62.78
Tariff R/kWh	1.50
Savings/yr in rand	94.17





LEDs also last much longer than incandescent or even compact fluorescent lamps (CFLs). And you can now find a wide range of LEDs.

The Ngewanas' lighting was switched entirely to LEDs, inside and out. All lighting was sponsored by Eurolux. The results were dramatic, with electricity for lighting falling by 74 percent so far.

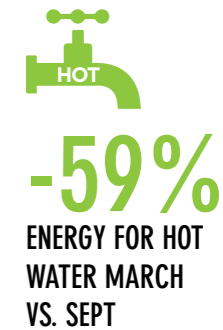
your current shower is using more than 10 litres a minute. Low-flow heads use less than 10 litres.

The Ngewanas did the Bucket Test on their showers and found that the flow rate ranged between 12 and 20 litres per minute. They upgraded to water-efficient models from Hansgrohe using 6 to 9 litres per minute. For a family that showers regularly, reducing your shower water use in half with low-flow shower heads can cut water and electricity bills by thousands of rands a year — all for an investment of a few hundred rands.

Avoid underfloor and wall heating, which waste by warming indiscriminately. If you need to keep a room warm, an oil-fin heater works well, but make sure you close the doors and windows to keep the heat in. Buy heaters with timers and/or thermostats to avoid wasting energy. For large spaces like a lounge, a gas heater is even better.

damp and regularly turned to speed up the process. Or you might let worms do the turning for you in a worm farm.

The Ngewana family reduced their waste to landfill by four-fifths (81%) by recycling and by using their compost heap and a small, R600 worm farm sponsored by WizzardWorms.



SEE HEATING & COOLING WEBSITE:

visit <http://mygreenhome.org.za/webisode/heating-cooling/>

INSTALL A LOW-FLOW SHOWER HEAD

Replacing your shower head is a cheap and easy way to save both water and the electricity used to heat it. You can do it yourself, with the help of this YouTube video (<https://www.youtube.com/watch?v=fiv4Zq9v4co>). And with modern, aerated shower heads, you will feel a blast of water, not just a trickle.

To see if you need a more efficient shower head, first do the 'Bucket Test'. Hold a bucket under the shower spray for 12 seconds and see if you collect more than 2 litres. If so,

PUT HEAT WHERE YOU NEED IT

If you must use electric heat in the winter, make sure it goes only where you really need it. An electric blanket, hot water bottle or fan heater all direct the heat to warm you up quickly. Infrared or quartz bar heaters are also efficient as long as you are in front of them. They don't heat the air, so switch them off as soon as you move away.

KEEP YOUR GREENS IN THE GARDEN

Recycling your paper, cans, glass and plastic is an essential part of any green home, but cooking and gardening can create a lot of waste, too.

When you throw biodegradable refuse like food and garden waste in the bin, it goes to the landfill where it breaks down into methane, a greenhouse gas 21 times more potent than carbon dioxide. Rather keep your grass clippings and other greens in the garden, turning them into fertilizer. You can start a compost heap at home for your kitchen fruit-and-vegetable offcuts and garden refuse. Keep the composting vegetation

STAY SECURE WITH MOTION-SENSOR LIGHTS OUTSIDE

Outdoor lights burning overnight will certainly lead to higher utility bills, but studies suggest they may also light the way for criminals to do their deeds, particularly if high walls shield the property from public view. Infrared motion-detector light fittings, which switch on for a pre-set time when something moves, are more likely to surprise unwanted visitors, while using less electricity. The Ngewanas replaced their exterior lights with LED motion-sensor floodlights, reducing electricity consumption further.

4

INVEST-TO-SAVE PURCHASES

- Install a solar water heater
- Or consider a heat pump for hot water
- Buy a more efficient pool pump
- Give your fireplace a window
- Protect your home with adequate ceiling insulation
- Go green with gas
- Choose an efficient refrigerator that makes the grade



Some greening options might cost more up-front, but still save you money over time. Such expenditures should be seen as an investment, in both a future of lower utility costs and a healthier environment.

INSTALL A SOLAR WATER HEATER

The Ngewanas' old geyser — and old water-wasting showers — would have used about R9 000 worth of electricity in the coming year. But judging from their September measurements, their new solar water heater has helped cut those costs by more than half.

The solar water heater was sponsored and installed by SolarTech, but would have cost about R28 000 after a R9 000 Eskom rebate advanced by the installer. That expense would have been covered by savings within 4 to 6 years, a normal range for a family of four or more. The system carries a 10 year warranty.

The Ngewanas have a high-pressure system consisting of two 2.5m² flat panels with a 300-litre tank, mounted horizontally, immediately above the panels. The water is heated indirectly, using a glycol solution that flows to the tank without an electric pump, using the thermosiphon effect. It's a system that would work well for many South African families. To learn more about how to choose a solar water heater, see the My Green Home Step-by-Step Guide to Solar Hot Water.

OR CONSIDER A HEAT PUMP FOR HOT WATER

If your home is shaded by large trees or the roof is not north-facing, it may not be suitable for a solar water heater. A great alternative is a heat pump, which works like an air conditioner in reverse, using less than half the electricity of a normal geyser. The cost is similar to or slightly cheaper than a solar water heater, and it also pays for itself in a few years. Bear in mind that a heat pump needs annual maintenance, doesn't last as long as most solar panels and makes some noise. With both solar and heat-pump options available, almost no home should have to use an old-fashioned geyser.

The Ngewanas' house has a heavily shaded outbuilding that now has an Alliance heat pump sponsored by Fourways Air-conditioning.



SEE OUTDOOR & TRANSPORT WEBISODE:

visit <http://mygreenhome.org.za/webisode/outdoor-transport/>



'It is never too late to save the environment, because we have to start somewhere.'
 – BULELWA

GIVE YOUR FIREPLACE A WINDOW

Open fireplaces may look charming, but you don't see the heat and pollutants whooshing up the chimney. Modern, closed-combustion fireplaces and wood stoves retain the charm while vastly improving efficiency by controlling the flow of air and keeping heat inside the home. Wood pellets, made from scrap wood and sawdust, or firewood from suburban tree fellers are also renewable fuels. Choose a wood-burner if the romance of building a fire inspires you; pellets are for those who value convenience.

The open fireplace in the Ngewanas' lounge was replaced with a Calore Piazzetta closed-combustion pellet fireplace. With the warmth from the fire and new insulation, the Ngewana family never needed their electric heaters during winter and greatly reduced their use of the gas heater.

BUY A MORE EFFICIENT POOL PUMP

The best-kept secret in home energy savings is a variable-speed pool pump. While most pool owners use 750w and 1100w pumps, these new models use only 150w to 300w at their lowest settings. Expect to pay R7 000 to R14 000 up front, compared to R2 000 for an ordinary pump, but you should earn all of that money back with a few years of electricity savings. Variable-speed pumps are also whisper-quiet and long-lasting.

The Ngewanas' old pump was one of the largest users of energy in the house. The combination of reduced hours and a new Speck Badu Eco-Touch variable-speed pump has made this one of the most dramatic improvements in efficiency at the Ngewana household. Compared to their old pump running 10½ hours a day, they will save about R3 500 in the coming year.

PROTECT YOUR HOME WITH ADEQUATE CEILING INSULATION

Poke your head into the ceiling. If you don't see a thick coat of insulation, you're losing too much heat in the winter through the roof — and gaining too much in summer. A layer of glass wool or blown-in cellulose made from recycled paper saves energy and improves comfort.

Previously, there was no insulation in the Ngewanas' house. The entire ceiling was fitted with Saint-Gobain Isover fibreglass batts 135 mm thick. (R-value: 3.38) The family



reported that their home was noticeably more comfortable this winter.

GO GREEN WITH GAS

Whether heating a room or a pan on the stove, gas has the edge over electricity in supplying instant heat and defying load-shedding. Its green advantage is that switching from electricity to gas cuts the carbon footprint of those appliances by about half. Operating costs using bottled LPG in 2014 are similar to electricity for those paying about R1,50 per kWh; the lucky few in Johannesburg who can connect to Egoli Gas can save much more and have the convenience of not needing to replace gas bottles. Note that a gas installation needs to be done by an accredited service provider and comply with safety regulations.



CHOOSE AN EFFICIENT REFRIGERATOR THAT MAKES THE GRADE

Refrigerators and freezers vary widely in efficiency, so when buying a new appliance make sure you check the energy label. Labels are still voluntary in South Africa; if you don't see a rating, assume it's not efficient. SA labels max out at A, but with EU labels, aim for an A+ or A++ fridge. Also look at the estimated annual consumption in kilowatt hours, which matters even more. The cost of a much more efficient refrigerator will ultimately pay for itself in electricity savings in most cases, so it's like getting a new appliance for free! In the Ngewanas' kitchen, a new Hisense refrigerator has an EU energy rating of A+ and estimated consumption of 310 kWh per year.



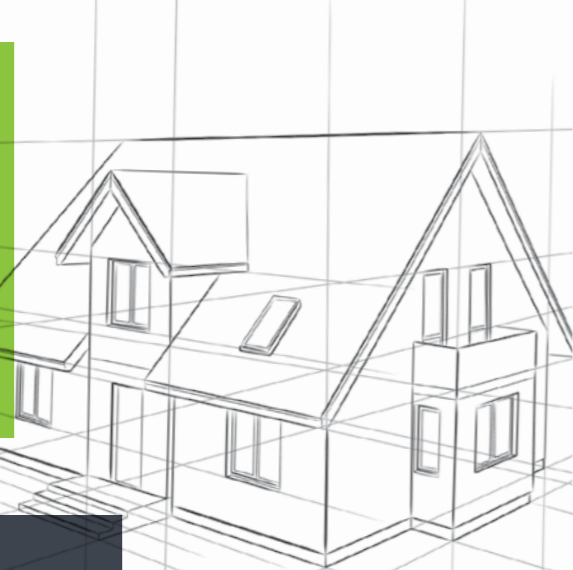
SEE APPLIANCES WEBISODE:
 visit <http://mygreenhome.org.za/webisode/appliances/>

HOME STAFF INVOLVEMENT

Greening a home is a team sport – everyone has to pull together. Domestic workers are often the main users of some of the most energy-intensive appliances and play a key role in managing waste in a home, while gardeners often use more water outside than the family uses inside. My Green Home has put together checklists that you can share and discuss with your staff, helping them to play a greater role in saving energy, water and waste.



TALK ABOUT IT
Explain to your housekeeper and gardener that you are looking for ways to save electricity and water. You might want to show them your bills or pre-paid vouchers, which will make the issue abundantly clear. Emphasise that you also don't want them to waste their time on unnecessary tasks – often saving energy and water means doing less work, not more.



LIVE-IN HELP
The greening process is incomplete if you make your house energy efficient but ignore an outbuilding where electricity is being wasted. Make sure that lighting there is as efficient as possible, preferably LED. If winters are cold, offer or encourage warm clothing and bedding, even electric blankets, rather than excessive heating. In short, all of My Green Home's recommendations – from low-flow shower heads to insulation – apply to outside rooms as much as inside rooms.

BONUS INCENTIVES
If you really want to sharpen your gardener's enthusiasm for saving water, consider incentives, since he can directly influence water bills. Show him the pattern of water expenses over the past year, and offer him a percentage of any savings for each month in the coming year, compared to the same month the year before, without making plant-life suffer.

AND IF THEY HAVE THEIR OWN HOME ELSEWHERE
If your staff pay for their own electricity at home, it's probably a bigger percentage of their budget than it is of yours. Consider what you can do to help. Ask what they are currently using for cooking, heating, hot water and lighting. For example, how many globes do they use, of what type, size and socket shape? LEDs might be an even brighter Christmas gift than biscuits.

HOW YOU CAN SAVE ENERGY

	NO COST	LOW COST	INVEST TO SAVE
Hot water 	<ul style="list-style-type: none"> Turn your geyser down to 55°-60° Take a shorter shower Switch off the geyser when you go away 	<ul style="list-style-type: none"> Install a low-flow shower head Connect a timer to your geyser Keep your geyser and pipes snugly insulated 	<ul style="list-style-type: none"> Install a solar water heater Alternatively, install a heat pump water heater
Lighting 	<ul style="list-style-type: none"> Encourage your family to switching off Let the sun shine in to provide light When choosing interior paint, choose light colours 	<ul style="list-style-type: none"> Replace your bulbs with LEDs Conserve cash with CFLs Stay secure with motion-sensor lights outside Put light above countertops 	<ul style="list-style-type: none"> Renovate to be LED-friendly Let the sky light dark rooms by installing a skylight
Heating & Cooling 	<ul style="list-style-type: none"> Strategically open and close curtains to trap heat Put your windows to work Dress for winter success Give your air conditioner time off in winter 	<ul style="list-style-type: none"> Use heat sources that warm discriminately like hot water Patch up windows to reduce draft 	<ul style="list-style-type: none"> Choose modern, clean combustion fireplaces and wood stoves that are efficient and control the air flow Protect your home with adequate insulation Save in summer and winter with ceiling fans
Appliances 	<ul style="list-style-type: none"> Keep your clothes out of hot water Reduce the ironing pile Wait for the sun, don't tumble dry a winter load Cook without using the oven 	<ul style="list-style-type: none"> Try the coolest stove – an induction cooker Add a rainy-day drying rack for laundry Keep cooking with cooking alternatives 	<ul style="list-style-type: none"> Choose an efficient fridge that makes the grade Install a dual-flush toilet Choose washing machines that have a cold-water wash option
Waste & Toxins 	<ul style="list-style-type: none"> Reduce, reuse and recycle – in the right order Help the recyclers by separating your waste Keep toxics out of your cupboards 	<ul style="list-style-type: none"> Keep your biodegradables in the biosystem Use microfiber instead of chemicals for cleaning Go natural with pest control 	<ul style="list-style-type: none"> Make sure you buy only what you need and buy it for keeps Avoid bottled water and invest in an activated carbon filter
Outdoors & Transport 	<ul style="list-style-type: none"> Don't work the pool pump overtime Get on your bike and ride (or walk) Water plants wisely 	<ul style="list-style-type: none"> Use public transport and save Indigenise your garden Grow your own food 	<ul style="list-style-type: none"> Buy a variable-speed pool pump Cover your pool Make your next car CO₂-tax-free Generate your own sun power

'One family can make a big difference. When one person knows how to save energy, other families then can learn from you.'
– ZWELI



IN CONCLUSION

Six months ago, the Ngewana family accepted the *My Green Home* challenge. They attempted to cut electricity consumption by 40%, water by 20% and waste to landfill by 75%. They even set a tougher target of using only 600 kilowatt hours (kWh) per month, which would reduce the tariff they pay on each additional kWh by 18%.

Some were sceptical that such drastic cuts would be possible in so short a time. But the Ngewana family have demolished every one of those targets by a good margin. Electricity at the

home has now fallen by 53%, water use by 44% and waste to landfill by 81%. For September 2014, total electricity consumption was just 442 kWh, well below the 600 kWh/month tariff step. With the savings on electricity and water combined, the Ngewanas are set to spend about R18,000 less in the coming year than they would have with their former home and lifestyle.

Through any number of our low-cost, no-cost and invest-to-save options, you too can reduce your spending on electricity, water and utilities and reduce your household's contribution to climate change.

PRODUCT & SERVICE SPONSORS

The following sponsors have assisted in making *My Green Home* possible:

EUROLUX – Lighting with LED products and ceiling fans
<http://www.eurolux.co.za/>

HISENSE – Efficient fridges and LED televisions
<http://www.hisense.co.za/>

BREATHECOAT – Eco-friendly paints, varnish and waterproofing
<http://breathecoatpaints.com/>

CALORE – Wood pellet fireplace <http://www.calore.co.za/>

SOLARTECH - Solar water heaters <http://setsa.co.za/>

SAINT-GOBAIN / ISOVER – ceiling and geyser insulations
<http://www.saint-gobain.co.za/>

HANSGROHE – Efficient showerheads, and aerators for taps and mixers - <http://www.hansgrohe.co.za/>

SPECK PUMPS – Energy efficient pool pump and LED pool light
<http://www.speck-pumps.co.za/>

CITRINE ENERGY – Rooftop solar photovoltaic system
<http://www.citrine.co.za/>

SNAPPY CHEF – Induction and gas stove
<http://www.snappychef.co.za/>

WATER RHAPSODY – Greywater and pool-side tank systems
<http://www.waterrhapsody.co.za/>

ALLIANCE / FOURWAYS – Heat pumps
<http://www.allianceheatpumps.co.za/>

HOMEBUG – Real time home energy management system
<https://www.homebug.co.za/>

LECICO – Dual flush toilets <http://www.lecicoso.co.za/>

CYCOLOGY – Electric bicycles <http://cycology.biz/>

VINEYARD HOTEL – Accommodation <http://www.vineyard.co.za/>

BOTANICAL SOCIETY OF SOUTH AFRICA – Indigenous plants
<http://www.botanicalsociety.org.za/>

SAINT-GOBAIN/ WEBER TYLON – Tiling
<http://www.weber-tylon.co.za/>

AQUATRIP – Home water management system
<http://www.aquatrip.com.au/>

CAPE CONTOURS – Landscaping service
<http://www.capecontours.co.za/>

GREEN AFRICA INITIATIVES – Mobile solar chargers
<http://www.greenafricainitiatives.co.za/>

WOOLWORTHS – Efficiency related household products
<http://www.woolworths.co.za/>

RELIANCE COMPOST – Compost and mulching
<http://www.reliance.co.za/>

SOLATUBE – Skylights <http://www.solatube.com/>

GEYSERWISE – Thermal control geyser management systems
<http://www.geyserwise.co.za/?page=1>

ECO SMART – Biodegradable cleaning products
<http://www.ecosmart.org.za/>

NOTRE ENERGY – Electrical Services <http://ne-solutions.co.za/>

NATURAL BALANCE – Wonderbag heat insulation cookers
<http://nb-wonderbag.com/>

POSTWINK – Recycling bins <http://www.postwink.co.za/>

BETTER EARTH – Biodegradable cleaning products
<http://www.betterearth.co.za/>

TIERHOEK ORGANIC FARM – Organic produce
<http://www.tierhoekorganic.com/>

CITY OF CAPE TOWN – Fleece blankets
<https://www.capetown.gov.za/>

WIZZARDWORMS – Worm farm for turning organic waste into compost <http://www.wizzardworms.co.za/>

This guide has been kept brief, but there are many more ideas for saving energy and water and reducing waste on the My Green Home website, www.mygreenhome.org.za, and in the longer version of this guide.

