



**Tshwane Green**

**Outreach Programme**

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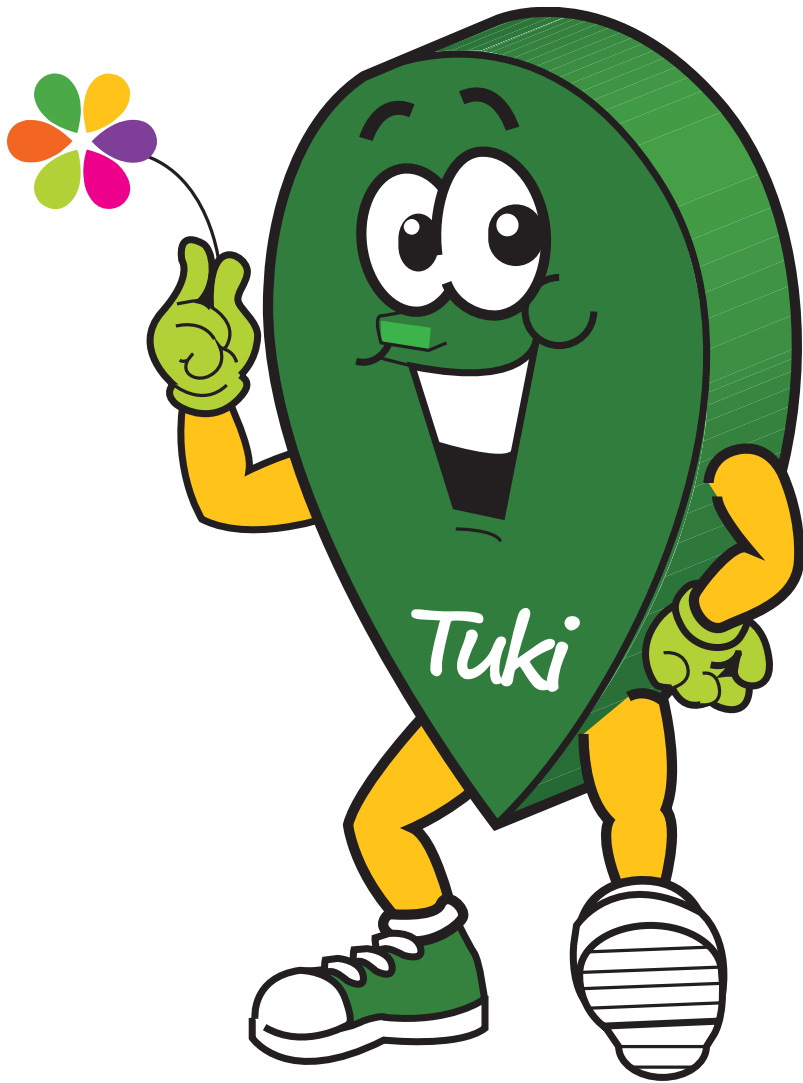
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# Tshwane Green



## **1. Introduction**

### **1.1. Purpose of Project Management Plan**

The purpose of the project plan is to provide a detailed description for the implementation of the Tshwane Green Outreach Project; to define the approach that will be taken to implement the Tshwane Green Outreach programmes. It will highlight objectives to be achieved, outline the various roles and responsibilities, milestones and budget requirements for achieving the Tshwane Green Outreach programmes. This document contains the details required to successfully execute the project. It is a living document that will be reviewed and updated on a need to basis until project completion.

### **1.2. Project Overview**

The City Sustainability Unit (CSU) acknowledges that the role of an awareness and education program is pivotal in mobilizing and stimulating City of Tshwane (CoT) residents to be active citizens and champions in achieving a low-carbon, climate resilient and resource efficient city as envisaged in the Tshwane 2055 vision document. In this Tshwane Green Campaign, the CSU has partnered with the South African Cities Network (SACN) for the implementation of its green economy/sustainability program. Two main activities of this program are the establishment of a baseline on carbon emissions for the City as well as its vulnerability to climate change. Incorporated into the program is an intensive education and awareness campaign on sustainability and climate change impacts aimed

to make a real difference to people's lives i.e. "The Tshwane Green Outreach Project", and will ignite CoT's excellence Tshwane Green as a leading green capital in Africa.

The Tshwane Green program will be a hard hitting campaign to relay information in a simple, transparent and thought provoking manner. This will be achieved in collaboration with relevant CoT departments, national and provincial departments, community stakeholders, industry leaders and the private sector. The program is envisaged to be a three-year program starting in 2013/14 – 2015/16.

The principles behind the Tshwane Green program are to develop Tshwane Greens in spirit and action within the communities, schools, business and CoT departments by instilling the following principles

To be an environmental leader, and build the capacity of other leaders within our community:

- ✓ To be innovative in finding and applying solutions to sustainability issues;
- ✓ To be adaptive to respond to the changes in social, economic, environmental changes
- ✓ To be collaborative and open minded;
- ✓ To be rational in choosing actions that deliver maximum benefit with least cost to the environment;
- ✓ It is a call to the community to action by inspiring, informing and empowering
- ✓ To provide opportunities to share and explore ideas and to participate in program and activities on sustainability
- ✓ To build partnerships to support a meaningful community response

### **1.3. Strategic objectives addressed**

SO 3: To fight poverty, build clean, healthy, safe and sustainable communities



SO 4: Ensuring good governance and financial viability, building institutional capacity and optimizing transformation in order to execute the Municipality's mandate.

#### 1.4. Objectives

- ✓ To raise awareness and increase understanding of the community, industries and learners on opportunities and benefits of a green economy;
- ✓ To provide an interactive platform, to actively TG with the CoT community and stakeholders in developing a path towards realizing the Tshwane vision 2055;
- ✓ To influence attitudes and perceptions of the community at large on sustainability principles;
- ✓ To foster pro – environmental behavioral change;
- ✓ To promote active citizenry;
- ✓ To promote sustainability and improve quality of life

#### 1.5. Constraints/Challenges

The following points have been identified and possible constraints to the project execution:

- ✓ The Tshwane Green project will be implemented in the 2013/2014 financial year, which will take place during the election season. This might result in lessening the impact of the program or it been seen as an electioneering campaign.
- ✓ The procurement process and supply chain management constraints may cause delays in the implementation of the program.

- ✓ Maintaining sustainability and momentum of the program in the next financial years, to prevent the program from being a once off program.
- ✓ Obtaining and maintaining sponsorship and partnership for the project.

### **1.6. Scope**

This Tshwane Green project plan is for the 2014/2015 municipal financial year ending June 2015. All Tshwane Green activities will be undertaken within the CoT municipal boundaries. The program is divided into six segments: Tshwane Green in Service delivery, Tshwane Green Soul [Individual], Tshwane Green in schools, Tshwane Green in business, Tshwane Green at home and the green festival program.

The Tshwane Green Outreach Project will be launched officially in 05 June 2014 during the Environmental month.

## 2. SUMMARY OF THE TSHWANE GREEN OUTREACH PROGRAMME JUNE 2014 TO JULY 2015

PROGRAMME/ ACTIVITY	DATE	RESPONSIBLE PARTIES	LOCATION/ VENUE	REGION	BUDGET
<b>TSHWANE GREEN SERVICE DELIVERY PAGES 14 - 19</b>					
<b>Launch of TG Service Delivery Programmes</b>	12 Nov 2014	CoT and Toro GC	Tshwane City Centre	Region 3	R200 000.0 - not budgeted for.
<b>Green Fridays</b>	14 Nov 2014 Friday, 19 Dec 2014 Friday, 16 Jan 2015 Friday, 13 Feb 2015 Friday, 13 Mar 2015 Friday, 10 Apr 2015 Friday, 15 May 2015 Friday, 19 Jun 2015 Friday, 17 Jul 2015 Friday	Toro GC and CoT	All 200 CoT buildings	Regions 1 to 7	R97 000.00
<b>Award Ceremony- for Departments</b>	The first one will be held in 2016	CoT and Toro GC	Tshwane City Hall	Region 3	R250 000.00 for a moderate function – not budgeted for
<b>Social Media Platform</b>	Start by September 2014	CoT and Toro GC	CoT and Toro GC offices, 757 Frates Rd, Rietfontein	Regions 1 to 7	R3 000.00
<b>TSHWANE GREEN SOUL PAGES 19 -22</b>					
<b>Signing of pledge on 7 Quilts</b>	Quilts to be designed by Aug 2014 To be ready 01 Nov 2014	Toro GC and CoT	&	Regions 1 to 7	R58 000.00
<b>Introduce the Tuki Dance (TribeOne Dinokeng Festival)</b>	27 <sup>th</sup> September 2014 ( Saturday)	CoT and Toro GC	Dinokeng Cullinan	Region 5	
<b>Ngewana family radio interview ( World food day)</b>	16 <sup>th</sup> October 2014 (Thursday)	CoT and Toro GC	Tshwane Fm	Region 1,3,and 6	
<b>Tshwane Green Ride</b>	25 <sup>th</sup> October 2014 ( Saturday)	CoT and Toro GC	TBC	Region 1	
<b>Distribution of comic strips ( National Day)</b>	01 <sup>st</sup> November 2014 ( Saturday)	CoT and Toro GC	Menlyn	Region 3	

<i>children's say</i>					
<b><i>Tuki dance, Ice breakers, and Banners (Dinaledi Festival)</i></b>	17 <sup>th</sup> December 2014 ( Wednesday)	CoT and Toro GC	Soshanguve ( Giant Stadium)	Region 1	
<b><i>Tuki Dance Christmas with our people</i></b>	TBC	TBC	TBC	TBC	TBC
<b><i>Introduce the Tuki Dance (TribeOne Dinokeng Festival)</i></b>	27 <sup>th</sup> September 2014 ( Saturday)	CoT and Toro GC	Dinokeng Cullinan	Region 5	
<b><i>Social Media Platforms – twitter and Facebook</i></b>	Start by September 2014	CoT and Toro GC	CoT and Toro GC offices in 757 Frates Rd, Rietfontein	Regions 1 to 7	R3 000.00
<b>TSHWANE GREEN SCHOOLS PAGES 22 - 29</b>					
<b><i>High Schools</i></b>					
Essays competitions - 14 schools in 3 regions	31 Oct 2014 – quarter finals (Friday) 27 Nov 2014 – Semi finals (Thursday) 20 Feb 2015 – Finals (Thursday)	Toro GC' and CoT	Atteridgeville, Mamelodi , Soshanguve	Regions 1,3, 6,	R96 000.00
- Green Schools Prize Giving	200 delegates – TBC (plan March/April 2015)	Toro GC, CoT	UNISA/UP/Innovation Hub		R150 000.00
- Social Media Platforms		Toro GC, CoT			R3 000.00
<b><i>Primary Schools</i></b>					
- Comic strips will be distributed in 10 Schools		Toro GC, CoT	Rayton, Bronkhorstpruit	Region 5 and 7	R70 000.00
- Social Media Platforms		Toro GC, CoT			R3 000.00
<b><i>Universities/ Tertiary Institutions</i></b>					
- Dialogue merged with COP 20 events to be held at UNISA	06 Nov 2014		UNISA, Pretoria	Region 3	R200 000.00 Not budgeted for
- University Green Fun Days	02 Sept 2014 Tuesday (UP), 09 Sept 2014 Tuesday (TUT)	CoT, Toro GC, UP and TUT	Tshwane University of Technology (TUT)	Region 1 and 3	R88 000.00

			University of Pretoria(UP)		
- Social Media Platforms		Toro GC, CoT			R3 000.00
<b>TSHWANE GREEN BUSINESS PAGES 30 - 34</b>					
<b><i>Fund Raising Event from Big Business to support the Green Economy Outreach Programmes–</i></b>	12/13 Mar 2015	CoT and Toro GC	Sheraton Hotel	Region 3	R300 000.00
<b><i>Tshwane Green Business Forum – Automobile industry – Encourage Green Scholarships and Bursaries</i></b>		CoT	Different venues	?	R20 000.00
<b><i>Awareness Video – on business opportunities related to the Green Economy</i></b>	Oct/Nov 2014 – production of video	Toro GC and CoT	N/A	All Regions with existing activities	Part of the bigger video under communities
<b><i>First Show Casing of the Video</i></b>	17 Nov 2014				
<b><i>Video Space on CoT buildings with Screens</i></b>	31 Dec 2014 (Wednesday) 30 Jan 2015 (Friday) 27 Feb 2015 (Friday) 30 Mar 2015 (Monday) 29 Apr 2015 (Wednesday) 29 May 2015 (Friday) 29 Jun 2015 (Monday) 30 July 2015 (Thursday)	Toro GC and CoT	All City buildings with screens	Regions 1 to 7	N/A
Business information road show: Presentation: Business opportunities in the green economy	26 <sup>th</sup> September 2014 (Friday)	Toro GC and CoT	Wintervelt community hall	Region 1	
Business information road show: Presentation: Business opportunities in the green economy	24 <sup>th</sup> October 2014 (Friday)	Toro GC and CoT	Refilwe community Hall	Region 5	
Business information road show: Celebrating 16 days of activism against women and children abuse.	07 <sup>th</sup> November 2014 (Friday)	Toro GC and CoT	Olienvenhoutsbosh, Multipurpose centre	Region 4	

Business information road show: celebrating disability month.	21 <sup>st</sup> November 2014 ( Friday)	Toro GC and CoT	Soshanguve Block F , Community Hall	Region 1	
Social Media Platforms		Toro GC and CoT		All 7 Regions	3 000.00
<b>TSHWANE GREEN HOMES PAGES 34 - 39</b>					
<b><i>Distribution of Educational promotional materials on the green economy / greenhomes</i></b>	29 Aug 2014 Friday, 19 Sept 2014 (Friday) , 17 Oct 2014,(Friday) 21 Nov 2014 Friday, 12 Dec 2014 Friday 23 Jan 2015 Friday, 20 Feb 2015 Friday 13 March 2015 Friday, 10 April 2015 Friday, 22 May 2015 Friday, 12 June 2015 Friday, 10 Jul 2015 Friday	Tuki, Toro GC	- <b>Junctions/Intersections</b> Solomon Mahlangu leading to Mamelodi and Garstfontein Region - Elias Motswaledi to Tshwane North, Soshanguve, Mabopane and Ga-Rankuwa Region - Junction leading to Atteridgeville and Laudium - Junction leading to Menlyn and Garstfontein - Junction leading to Centurion and Highveld - Junction from Silverton to Mamelodi	Regions 1, 3, 4 and 6	R243 000.00 budgeted for For Posters an additional budget R200 000.00 not budgeted for
<b><i>New Home Owners programme</i></b>	Date to start will be determined by progress on discussions with the billing section of the City	CoT and Toro		Regions 1 to 7	R40 000.00 not budgeted
<b><i>Greening Households – using Ngwewama Family Tips</i></b>	January 2014 to March 2015 utility accounts Draw April 2015	CoT and Toro GC	Waverly or Rooihuiskraal	Region 4 Region 3	R30 000.00 not budgeted
<b>TSHWANE GREEN COMMUNITIES PAGES 39 – 47</b>					
<b><i>Flash Mob</i></b>	27 Sept 2014 (Saturday)	Toro GC	Menlyn– Pretoria	Region 3	R262 000.00
	11 Oct 2014	Toro GC	Sunnypark Mall – Pretoria Central	Region 3	
	20 Dec 2014	Toro GC	Denlyn–Denneboom	Region 6	

	18 Jan 2015	Toro GC	Jubilee Mall – Hammanskraal	Region 2	
<b>Sports Events – Rugby, Soccer, Cricket</b>	10 Oct 2014 17 Dec 2014	Toro GC and CoT	Loftus Stadium Super Sports Park	Regions 3 and 4	R165 000.00
<b>Tshwane Ride</b>	25 Oct 2014	Toro GC and CoT	From Mamelodi using Solomon Mahlangu Road to the Union Buildings	Regions 3 and, 6	R1 million to R2 million depending on pitch
<b>Video Space on CoT buildings with Screens – Video in public buildings</b>	31 Dec 2014 (Wednesday) 30 Jan 2015 (Friday) 27 Feb 2015 (Friday) 30 Mar 2015 (Monday) 29 Apr 2015 (Wednesday) 29 May 2015 (Friday) 29 Jun 2015 (Monday) 30 July 2015 (Thursday)	Toro GC' and CoT	All City buildings with screens	Regions 1 to 7	170 000.00
<b>Posters – Customer Care Centres</b>	By end of October 2014	Toro GC	Rosslyn	Region 1	
	By end of October 2014	Toro GC	Laudium	Region 3	
	By end of October 2014	Toro GC	Centurion	Region 4	
	By end of October 2014	Toro GC	Hammanskraal	Region 2	
	By end of October 2014	Toro GC	Nellmapius	Region 6	
	By end of October 2014	Toro GC	Bronkhorstspuit	Region 7	
	By end of October 2014	Toro GC	Ryton Customer Centre		
<b>Posters in Libraries</b>	End of September 2014	Toro GC	Akasia	Region 1	
	End of September 2014	Toro GC	Hercules	Region 1	
	End of September 2014	Toro GC	Temba	Region 2	
	End of September 2014	Toro GC	ESkiaMphahlele	Region 3	
	End of September 2014	Toro GC	Waverly	Region 3	
	End of September 2014	Toro GC	Eesterust	Region 6	
	End of September 2014	Toro GC	Mamelodi-West	Region 6	
	End of September 2014	Toro GC	Laudium	Region 4	
<b>Electronic and Media</b>	Sept 2014 to July 2015	80% CoT 20% Toro	Impact all 7 Regions and	Regions 1	96 000.00

		GC	South African in general	to 7	
<b><i>Social network platforms</i></b>	Sept. 2014 to July 2014	70% Toro GC 30% Co	Impact all 7 Regions and South African in general		R8 000.00
<b><i>SUSTAINABILITY WEEK</i></b>					

### 3. PROJECTS/ IMPLEMENTATION PLAN OF TSHWANE GREEN OUTREACH PROGRAMME



#### 3.1 Tshwane Green Service Delivery

Changed from 'Tshwane Green in Service Delivery' to 'Tshwane Green Service Delivery'

The Tshwane Green (TG) service delivery will be the first segment of The Tshwane Green Outreach Project to be implemented from 2014/2015 financial year, while straddled throughout the program life span. The idea is to lead by example while exploiting the



opportunity for sustainability that exists in the public sector e.g. fuel efficiency/switching in transport; efficient use of electricity; proper waste management as well as efficient water management. As such, the segment will focus on these areas over time with separation of waste at source targeted as the main activity for immediate implementation during 2014/2015.

The main goal of the Tshwane Green service delivery is to create sustainability conscious work force within the CoT. Tshwane Greens will be appointed in the various departments' office/work areas/sections that will drive the efforts of sustainability within their respective office/work/area/section. The Tshwane Green will be appointed through a formal appointment letter that will clearly define the various roles and responsibilities. All TG's will be trained and provided with the resources, skills, and knowledge necessary to effect change and serve as leaders and change-agents both in their offices/sections.

Tshwane Green Service Delivery focuses on internal efforts undertaken by employees of CoT to lead by example in the journey towards a green economy. City of Tshwane through Tshwane Green Service Delivery is leading by example.

#### **Activities entailed in Tshwane Green Service Delivery:**

- **Launch**

The Mayor will through an event which will include local press conference, address to councilors, address all staff through intranet, announcement in the internal newsletter, and launch all the Tshwane Green Service Delivery projects as listed below

Date of the launch

- 12 November 2014 (Wednesday)

- **Responsible Parties**

City of Tshwane – prepares the Mayor's speech, invitation list, secure the venue, provide any snacks if required.

Toro GC – monitor and manage RSVP's, prepare the press release for approval by CoT.

- **Location**

CoT to advise on venue which will be in Tshwane City Centre – Region 3 (One of the Municipal buildings).

- **Budget**

R200 000.00 – not budgeted for.

- **Integrate sustainability as a key performance area across the City departments.**
- **An internal recycling program in all CoT departments in 2014. This program will allow all employees to separate waste at source so as to reduce the amount of waste taken to the landfill site.**
- **The Tshwane Green program will be included in the Tshwane service excellence awards to award the most diligent and dedicated Tshwane Green/s service delivery.**
- **Waste management audit to identify types of waste generated by the different departments will be undertaken.**

- **Tshwane Green Friday;**

Once a month – on a Friday all twenty two thousand employees of CoT will wear badges in support of the Tshwane Green Outreach Programme, and Reps will wear golf-shirts and badges.

The Green Fridays will be a platform for departments to showcase their efforts in recycling, saving energy, paper, etc.

Evaluation of the efforts by departments will be evaluated quarterly as a build up to the Awards Ceremony.

All staff will be motivated to learn the Tuki dance and song which will be played on the TV screens of the CoT buildings.

CoT has almost 200 buildings that must be activated with the Tshwane Green Service Delivery theme.

-Dates of Green Fridays

- 14<sup>th</sup> November 2014 ( Friday)
- 19<sup>th</sup> December 2014 ( Friday)

- 16<sup>th</sup> January 2015 ( Friday)
- 13<sup>th</sup> February 2015 ( Friday)
- 13<sup>th</sup> March 2015 ( Friday)
- 10<sup>th</sup> April 2015 ( Friday)
- 15<sup>th</sup> May 2015 ( Friday)
- 19<sup>th</sup> June 2015 ( Friday)
- 17<sup>th</sup> July 20115 ( Friday)

- **Responsible Parties**

Toro GC – to design, organize printing of 500 golf shirts and plus minus 22 000 badges and deliver to CoT for distribution, take video of two of the events, include the Tuki song and dance in the awareness campaign video.

CoT – to develop evaluation criteria

- **Location**

All 200 CoT buildings – Region 1 to 7

- **Budget**

Total budget = R97 000.00 – broken down as follows:

R55 00.00 for 500 Golf shirts

R42 000.00 - There is a need for the twenty two thousand (+22 000) badges. Unfortunately with the current budget, it was not budgeted for. A decision was made to replace the Five Hundred (500) t-shirts worth R42 000.00 catered for in the current budget with the badges.

- **An award category for the most performing department will be held annually.**

The most diligent and dedicated departments will be awarded. The Award Ceremony will be held once a year, the first award ceremony for Tshwane Green Service Delivery will be hosted in 2016.

It was suggested that the Departmental Awards Ceremony (Tshwane Green Service Delivery) be aligned with Tshwane Excellence Awards.

Mr. Mphaga to find out how the two can be aligned, and determine how some the concerns that were raised such as whether the Tshwane Excellence Awards will steal the focus of Tshwane Green Service Delivery Awards, as Tshwane Excellence Awards focuses on individuals and Tshwane Green Service Delivery Awards is designed to focus on departments.

#### **Date**

The first award ceremony for Tshwane Green in Service delivery will be hosted in 2016.

#### **Responsible Parties**

CoT

#### **Location**

City Hall

#### **Budget**

R250 000.00 moderate function – not budgeted for

- **Social Media Platforms**

- Emails and intranet – “Tuki says”, this programme will promote messages to encourage behavior in staff regarding the importance of the Green Economy and its life changing expectations.

- Twitter and Facebook – a Twitter and Facebook page focusing on issues of the Green Economy will be set up by CoT and managed and monitored by Toro GC. This will also serve as a tool to measure interest and enthusiasm in the staff regarding issues of the Green Economy.

- Facebook and Twitter to be further discussed with The Marketing Department of CoT; from content, layout and protocol.

Tuki says’ will be used on emails that go to internal and external audiences. A suggestion will be put to Tinyiko to put the messages on the CoT letter heads.

**Date:**

To start by mid September 2014

**Responsible Parties:**

CoT and Toro GC

**Location:**

CoT & Toro GC offices – 757 Frates street, Rietfontein interaction with Region 1 to 7 employees (especially on intranet if

Possible)

**Budget:**

R3 000.00



### 3.2 Tshwane Green Soul

This petal was changed from 'Tshwane Green Faith' to 'Tshwane Green Soul'

Tshwane Green Soul focuses on individual efforts taken by people to commit and change their attitudes and behavior towards the Green life style.

#### Activities

**5 huge quilts, each in the design of 'Tuki' will be designed;**

This quilt will be used for individuals at foot traffic centers' (customer service centers) and in our events to sign and pledge to change/commit to change their lifestyles. Color of the quilt: Gold and a different green life style will be written on each quilt.

During our Flash mob events the quilt will be on display for people to sign.

Celebrities, Opinion leaders, Journalists, Academics, Sports personalities, and youth will also be invited to sign the pledge and shared on their and our communication platforms. This is done to pull support and get publicity from the public that are influenced by these personalities.

### Dates

Quilt to be designed by end of August 2014

Quilt to be ready in; 01 November 2014 (Saturday)

### Responsible Parties

Toro GC to have completed design of Pledge Quilts by the 19 August 2014 and approved by CoT by 20 August 2014

Production should be complete by 9<sup>th</sup> September 2014

### Location

The Tshwane Green Souls Pledge Quilts will rotate around the following customer care centers as well as be available for pledging at City key events.

POSTERS IN CUSTOMER CARE CENTERS	LOCATION	DATE
	Rosslyn – Region 1	By end October 2014
	Laudium – Region 3	By end October 2014
	Centurion – Region 4	By end October 2014
	Hammanskraal – Region 2	By end October 2014
	Nelmapius – Region 6	By end October 2014
	Bronkhorstspuit – Region 7	By end October 2014
	Rayton Customer Centre – Region 5	By end October 2014

The quilt will be taken to radio interviews shows for presenters to sign and photos shared on social media platforms (Twitter and Facebook)

### **Budget**

R58 000.00 not budgeted for

- **Social Media Platforms**

Facebook and Twitter to be further discussed with The Marketing Department of CoT; from content, layout and protocol.

Social Media will be a platform to engage with the public and encourage them to share their ideas in saving energy, stop littering, giving tips and creating dialogue.

### **Date**

Throughout the campaign September 2014 to July 2015

### **Responsible Parties**

CoT and Toro GC

### **Location**

All 7 Regions

### **Budget**

R3000.00



- Working together with the CoT on festivals and activities that are already scheduled by casing the Tuki Dance and having a 1 minute message to educate individuals on the green economy

<b><i>Introduce the Tuki Dance (TribeOne Dinokeng Festival)</i></b>	27 <sup>th</sup> September 2014 ( Saturday)	CoT and Toro GC	Dinokeng Cullinan	Region 5	
<b><i>Ngewana family radio interview ( World food day)</i></b>	16 <sup>th</sup> October 2014 (Thursday)	CoT and Toro GC	Tshwane Fm	Region 1,3,and 6	
<b><i>Use the Tuki dance as the Ice breaker and Banners (Dinaledi Festival)</i></b>	17 <sup>th</sup> December 2014 ( Wednesday)	CoT and Toro GC	Soshanguve ( Giant Stadium)	Region 1	
<b><i>Tuki Dance- ( Christmas with our people)</i></b>	TBC	TBC	TBC	TBC	TBC
<b><i>Introduce the Tuki Dance (TribeOne Dinokeng Festival)</i></b>	27 <sup>th</sup> September 2014 ( Saturday)	CoT and Toro GC	Dinokeng Cullinan	Region 5	



### 3.3 Tshwane Green Schools

A program to actively involve schools in sustainability programmes, by conducting an educational awareness in 14 schools (2 per region).

### Activities for TG in schools

- **Develop a sustainability education program/module for different grades**

This programme will ensure that focus on the Green Economy begins to be given the importance it deserves by including it in the school curriculum.

- **Enrolment as “Green Schools in the Sustainability database”.**
- **Give 14 High Schools– grade 10 an assignment to write an essay, a choice of 5 topics which talk to the Green Economy will be given to the schools, to choose a topic they prefer. It is important that this awareness campaign in schools includes an academic element.**

**This completion will culminate in a Green School Prize giving ceremony to award the winners of the assignment as shown in the table below; There will be first, second and Third prize**

<b>Quarter Finals</b>	<b>Semi Finals</b>	<b>Finals</b>
31 October 2014 (Friday)	27 November 2014 (Thursday)	19 February 2015 (Thursday)

The 14 schools will be selected from the schools that were given “WI-FI” connection by the City which was in three (3) regions, namely regions 1,3 and 6 the areas of focus being Soshanguve, Mamelodi and Atteridgeville, the information needs to be sent out on time to inform the schools

- **Topics of the essays will be around the following themes**
  - Sustainable Energy; renewable energy
  - Sustainable transport and mobility

- Mitigation
- Adaptation
- **The outcome of the essays should illustrate an element of:**
  - Research
  - Recommendations
  - Critic of the current efforts with regard to the topic
  - Solutions
  - Awareness of Carbon Emissions
  - Referencing

A panel will be selected to evaluate and review the essays.

Schools will be visited and pupils addressed by an official representative from CoT about the competition and Objective of Tshwane Green Campaign.

The winning essays will be published on CoT internal newsletter, Local community newspapers (e.g. Sosh Times, Rekord), and the winners will be captured on video and the video to posted on Social platforms (YouTube, Facebook)

From the submitted essays, CoT will take the recommendations into consideration for implementation and roll out of solutions and enhancing the Green Economic Programme.

Prizes will be for the schools not individual pupils.

Prizes will mostly depend on sponsorships that have to be requested from business.

A need analysis on the requirement of the individual schools will be done as a guide on the type of prizes schools can win.

Organisations that sponsor will be given an opportunity to be part of the panel for essays analysis and reviews.

### Dates

25<sup>th</sup> August 2014 (Monday) both schools and district must be communicated to.

### Responsible person

CoT to work with research and innovation of Cot, even get judges from that division.

### Location – List of participating schools

Name of School	Place	Region
Babina Phuthi Secondary School	Soshanguve Block BB	Region 1
Dr A T Moreosele Secondary School	Soshanguve Block U	Region 1
Funekile Secondary School	Soshanguve Block V	Region 1
Ntsako Secondary School	Soshanguve Block F	Region 1
Tebogwana High School	Soshanguve Thema	Region 1
Mamelodi Secondary School	Mamelodi – Tsomo Street	Region 6
Nelmapius Secondary School	Mamelodi – Nelmapius Road	Region 6
Ribane – Laka Secondary School	Mamelodi – Maseko Street	Region 6
Vukani Mawethu Secondary School	Mamelodi – Tsomo Street	Region 6
Begonia Secondary School	Atteridgeville – Sekhukhune	Region 3
Edward Pated Secondary School	Atteridgeville – Maaza Street	Region 3
Flavius Maraca Secondary School	Atteridgeville – Monadic and Mazola Street	Region 3
Phelindaba Secondary School	Atteridgeville - Cnr. Moroe & Maboja Street	Region 3
Saulridge Secondary School	Atteridgeville – Sekhu Street	Region 3

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Venues that could be considered for the awards ceremony: Unisa / UP / Innovation Hub. A venue that is equipped with technology.

### **Budget**

R96 000.00

**Award ceremony** – estimate of 200 delegates R150 000.00 for a moderate event not budgeted for

TOTAL R246 000.00

- **Primary Schools**

Comic strips will be distributed to 10 Primary Schools in different languages, it will be – the schools are still to be identified.

### **Responsible person**

Toro GC – CoT to approve content

### **Location**

The 10 schools will be from Region 5 and 7

### **Budget**

R70 000.00 for 20 000 copies of 1 edition at R68 000.00 excluding distribution the current budget can only accommodate 1 edition.

- **Tertiary Institutions**

- Tshwane University of Technology (TUT) and University of Pretoria (UP) programme will be as follows;

**Activities**

**A Green Fun Day** where there will be the following activities taking place:

Wrap trees with green fabric with messages written on them

Flash mobs: One great benefit of this activity is that it is something everyone can participate. There are many roles besides performing, even if it's just supporting, the performers passing out fliers or promotional materials. All are needed

Local Radio stations will do live broadcasts

There will signing of the Tuki Pledge quilts.

Tuki will distribute the promotional materials.

- Posters on Notice boards (Environmental faculty)
- Tshwane TV must be contacted through the CoT Marketing division.

**Dates and Location**

- 02 September 2014 (Tuesday) University of Pretoria (UP) Region 3
- 09 September 2014 (Tuesday) Tshwane University of Technology (TUT) Region 1

**Responsible Person**

Toro GC and COT

## Budget

R88 000.00 – shoe string budget

- **A dialogue on the Green Economy will be held at UNISA as part of the COP 20 programme (Dialogue centered on the Cop 20 Preparation)**
  - Political support from government will be vital for this event
  - The Diplomatic Core division of the CoT will have a vital role to play
  - Inform all stakeholders concerned in making university events possible.
  - Get a reputable person to be a spoke person for the dialogue.

## Topics:

- Resilient cities (Adaptation)
- Cop 20 negotiation elements.

This event will require a lot of planning and organizing. This event must be carried out with sophistication. We must involve Embassies to set the platform. To avoid stepping in the national agenda the Diplomatic unit within the CoT must be consulted.

95% of the work or organizing will be from CoT side; this is for purposes of observing protocol.

Giveaways (spotties) will be given to audience that answers questions.

## Date:

Date: 06 November (1<sup>st</sup> week of November) 2014 (Thursday)

### **Responsible Parties**

95% of the work or organising will be from CoT side; this is for purposes of observing protocol.

5% by Toro GC.

### **Location**

Proposed venue: UNISA

### **Budget**

R200 000.00 estimated participants 200

- **Social Media Platforms**

Facebook and Twitter to be further discussed with CoT regarding content, layout and protocol.

Social Media will be a platform to engage with Learners/Students and encourage dialogue around the Green Economy issues and to share their ideas.

### **Date:**

Throughout the campaign

### **Responsible Parties**

CoT and Toro GC



**Location**

All seven Regions

**Budget**

R3000.00

**3.4 Tshwane Green Business**

It is a program to develop sustainable businesses in Tshwane, which will participate in environmentally friendly or green activities to ensure that all processes, products, and manufacturing activities adequately address current environmental concerns while maintaining a profit. In other words business that, “meets the needs of the present world without compromising the ability of the future generations to meet their own needs”. Businesses that meets the needs of the present world without harming the environment and still makes profit.

### Activities of the Tshwane Green Business;

- **Develop toolkits for sustainability in business**
- **Link businesses to upscale green economy programmes (symbiosis)**
- **Develop a sustainable business advisory programme**
- **Incentivize business that conduct their carbon footprint and minimize their own carbon emissions.**
- **The City Sustainability Unit (CSU) to be part / member of business forums so as to be able to facilitate and monitor the Green Economy agenda within business.**

The CSU currently sits on the Business Forum of the four automobile Companies Nissan, Ford, Mazda, BMW in the CoT

Business should be encouraged to provide Bursaries and Human Resource Development schemes, looking at fields of study that are within the environmental and Green Economy fields.

Mr. Mphagato put this item in the agenda to the green forum/business forums.

### Date

29 August 2014: Tshwane Green Forum Automobile industry

### Responsible Parties

CoT

### Location

Tshwane

## Budget

R20 000.00

- **Develop as part of the awareness and educational programme a video which will be put in public buildings an element that illustrates clearly business opportunities in the Green Economy.**

(With emphasis on business opportunities, entrepreneurial skills and job creation opportunities.)

Align these initiatives with projects that are already in place.

Check with DTI what packages /offerings they have for SMME opportunity in the Green Economy.

## An awareness video/academic/ awareness

Toro GC should complete the production of the video by October – November 2014

Space for the video to show in CoT buildings – where there is a lot of foot traffic need to be identified by CoT as the programme will have to show at least once a month.

## Date:

The first showing will be on the 17 November 2014 (Monday)

- 31 December 2014 ( Wednesday)
- 30 January 2015 (Friday)
- 27 February 2015 (Friday)

- 30 March 2015 (Monday)
- 29 April 2015 (Wednesday)
- 29 May 2015 (Friday)
- 29 June 2015 (Monday)
- 30 July 2015 (Thursday)

### Responsible Parties

Toro GC to lead this project. And will develop the content of the video with advice from CoT

The CoT will be responsible for identifying the venues to show the video.

### Location

All City buildings with screens

### Budget

Will form part of the budget for communities (see budget under communities section)

- **Host a Big Business Fund Raising Event to encourage funding of the Green Economy outreach programmes/projects.**  
(The mayor to identify and invite the Premier or MEC to be the guest speaker at the event, who will be a draw card for Big Business.)

Suggestions were made around the Ministry of Small Business

Toro GC to approach potential sponsors for this event e.g. PPC and Transnet.

Toro to capture the whole event on video

### Date

Date: 11 March 2015 (Wednesday) / 12 March (Thursday) 2015

### Responsible Parties

CoT and Toro GC

### Location

Sheraton Hotel - Tshwane City Centre - Region 3

### Budget

R300 000.00 This event can be budgeted for from Big Business e.g. Transnet and PPC

- **Sharing Business Opportunities in the Green Economy with communities in partnership with the Broader Business Opportunities programme of the city**

			Venue	Region	Budget
Business information road show: Presentation: Business opportunities in the green economy	26 <sup>th</sup> September 2014 (Friday)	Toro GC to prepare the power point presentation and CoT /CSU to do presentations	Wintervelt community hall	Region 1	nil
Business information road show: Presentation: Business opportunities in the green economy	24 <sup>th</sup> October 2014 (Friday)	Toro GC and CoT	Refilwe community Hall	Region 5	
Business information road show: Celebrating 16 days of activism against women and children abuse.	07 <sup>th</sup> November 2014 (Friday)	Toro GC and CoT	Olienhoutsbosh, Multipurpose centre	Region 4	
Business information road show: celebrating disability month.	21 <sup>st</sup> November 2014 ( Friday)	Toro GC and CoT	Soshanguve Block F , Community Hall	Region 1	



### 3.5 Tshwane Green Homes

The TG at home is aimed at creating sustainable households that are cognisant of the “future disadvantaged”; this is a transformation program that is aimed at changing perceptions and behavior of the communities. It is an outreach program that is aimed at addressing the following themes:

- ✓ Pollution and waste management
- ✓ Integrated and water resource management
- ✓ Sustainability Transport, Improving Mobility and connectivity
- ✓ Sustainable Energy
- ✓ Sustainable Communities, health and social development and maintenance and provision of ecosystem goods and services
- ✓ Green buildings and the green environment
- ✓ Sustainable agriculture and food security and maintenance provision of etc.

### Activities of the Tshwane Green Home outreach programme

- **Sustainability challenge- all households present at the education outreach programme will be given information on how to green their households. The challenge is for all households in the different regions, to implement some if not all of the tips provided or to go beyond the scope of information. To develop innovative ideas for greening their homes using the resources that they have. Nothing should be purchased. Provide Evidence in the form of a reduction in energy bill/ water bill and demonstration of the tips implemented (portfolio of evidence) or the innovation developed.**
  - Identify homes that will be used to adopt energy tips and those families will be featured in publications.
  - 2<sup>nd</sup> option is to have drop points at municipal places where people will drop their electricity or water bills of three months to highlight how much they saved. At the end there will be a draw where the three winning families will win prizes and also be featured in a publication to share the tips or tools they used to save. The prizes will be sought from private sector involved in the green economy.

**Date:** January 2015 to March 2015 the Draw will be in April 2014

**Responsible Parties:**

Toro Global Consulting and City of Tshwane

**Location:**

Waverly / Rooihuiskraal

**Budget:**

R30 000.00

- **The Tshwane Greens per ward will be responsible for monitoring the participant's progress and to provide support.**
- **Provide the participants with the sustainability challenge pack**

- **Innovations will be linked with the relevant sectors for skills development, possible job opportunities or development of the innovation.**
- **New home owners to be given a flyer/leaflet which will educate them on the Green Home agenda.**

The flyers/leaflets will be distributed in the same envelope with the first utility account.

New home owner refers to someone who has bought a property whether for the first time or more.

Toro GC will have to develop the flyer using content from the Green Home Ngwenya family competition.

**Date:**

To start in November 2014 till July 2015

**Responsible Parties:**

CoT

**Location:**

All CoT new home owner therefore all 7 regions

**Budget:**

First we determine average number of new home owners per month

Flyer can cost R2.00 to R5.00 depending on quality, content and design

R 40 000.00

- **Tuki at strategic junctions will stand two (2) hours a day, once a month, distributing promotional materials for business and communities.**
  - Flyers and other promotional materials, such as fridge magnets, bumper stickers, rulers etc, with information about each and every element will be distributed; a separate flyer will be used for each and every one of the six elements.



**Dates on which Tuki will be at the junctions to distribute promotional material**

- 29 August 2014 (Friday)
- 19 September 2014 (Friday)
- 17 October 2014 (Friday)
- 21 November 2014 (Friday)
- 12 December 2014 (Friday)
- 23 January 2015 (Friday)
- 20 February 2015 (Friday)
- 13 March 2015 (Friday)
- 10 April 2015 (Friday)
- 22 May 2015 (Friday)
- 12 June 2015 (Friday)
- 10 July 2015 (Friday)

**Date:**

All flyers and promotional material must be ready for distribution before the 29 August 2014

**Responsible Parties:**

Toro GC to produce and deliver to CoT. All flyers and promotional material must be ready for distribution before the 29 August 2014

**Location: Junctions**

Solomon Mahlangu leading to Mamelodi and Garstfontein Region 6– 29 August 2014 (Friday)

Elias Motswaledi leading to Pretoria North, Soshanguve, Mabopane and Garankua Region 1–19 September 2014 (Friday)

Junction leading to Atteridgeville and Laudium– Region 317 October 2014 (Friday)

Junction leading to Menlyn and Garstfontein - Region 6–21 November 2014 (Friday)

Junction leading to Centurion and Highveld – Region 4 – 12 December 2014 (Friday)

Junction from Silverton to Mamelodi - Region 6– 23 January 2015 (Friday)

- 20 February 2015 (Friday) -TBC
- 13 March 2015 (Friday) -TBC
- 10 April 2015 (Friday)- TBC
- 22 May 2015 (Friday)- TBC
- 12 June 2015 (Friday)- TBC
- 10 July 2015 (Friday) – TBC

The venues to be confirmed will be done after assessing the impact of the first six interventions.

### **Budget:**

R243 000.00 promotional material (this budget now includes flyers which were budgeted for initially)

R200 000.00 – poster not budgeted for

Distribution R 10 000.00



*Communities*

### 3.6 Tshwane Green Communities

The Tshwane Green Communities is aimed at creating sustainable communities that are cognisant of the value of the Green Economy into the future; this is a transformation program that is aimed at changing perceptions and behavior of the communities. It is an outreach program that is aimed at addressing the following themes:

- Pollution and waste management
- Integrated and water resource management
- Sustainability Transport, Improving Mobility and connectivity
- Sustainable Energy
- Sustainable Communities, health and social development and maintenance and provision of ecosystem goods and services
- Green buildings and the green environment
- Sustainable agriculture and food security and maintenance provision of etc.

Tshwane Green Communities is centered on activating the campaign to create awareness in communities at large, to get the community motivated and excited about the Tshwane Green Campaign through activities such as Flash Mobs.

### Activities of the Tshwane Green Communities

- **Flash mobs at shopping complexes/mall;**
  - The flash mob will require communication with center or mall managers.
  - Capture the objective and purpose of the flash mob

### Date and Venues of Flash mobs

- Date: 27 September 2014 (Saturday) –to be held at Menlyn Shopping Mall - Menlyn
- Date: 20 December 2014 (Saturday) – to be held at Dennlyn Mall - Mamelodi
- Date: 17 January 2015 (Saturday) - to be held at Jubilee Mall - Hammanskraal
- Date: 11 October 2014 (Saturday) – to be held at Sunny Park Mall – Tshwane City Centre

### Date

Tuki dance and Flash mob to be completed and approved by Cot by Friday 22 August 2014.

Draft of letter to be sent to the shopping malls requesting the flash mob to be submitted to CoT by Toro GC for approval by 19 August 2014.

CoT to have edited the letter and put it on their letterhead by 22 August 2014.

Distribution of the letter to the malls by Toro GC from 25 to 26 August 2014.

### Responsible Parties

Toro GC and CoT

### Budget

R262 000.00

- **Presentation of messages at sporting events using Tuki;**

- Talk to sports department of CoT about sending letters to respective teams /organising teams; about Tuki parading messages before the start of each game at venues such as Loftus.
- The sporting codes that will be targeted for this event are rugby, soccer and cricket
- Banners with messages with relevant Green Economy information will be held up to the audiences and fans, Tukis will be carrying the banners around the field before the match starts.

#### **Date**

10 October 2014– Loftus -**Rugby** - Blue Bulls versus ABSA Qualifier

17 December 2014 - Super Sports Park -**Cricket**– South African Proteas vs West Indies This is opening day and would like the Mayor to be present -

The **Soccer** audience catch will be done as soon as the waiting Fixtures schedule is out so as to see when Mamelodi Sundowns match around City of Tshwane will be held with the period October 2014 to July 2015

#### **Responsible Parties**

Toro GC

Lofts Stadium Management - Centurion - Region 3

Super Sports Park Management – Centurion - Region 4

Lucas Masterpieces Moripe Stadium - Atteridgeville – Region 3

CoT to approve the letter requesting the use of the stadiums

### **Location**

Lofts Stadium Management, Super Sports Park and Lucas Masterpiece Moripe stadium.

### **Budget**

R165 000.00

- **Delivery of promotional materials which carries awareness and education messages relating to the importance of:**
  - Pollution and waste management
  - Integrated and water resource management
  - Sustainability Transport, Improving Mobility and connectivity
  - Sustainable Energy
  - Sustainable Communities, health and social development and maintenance and provision of ecosystem goods and services
  - Green buildings and the green environment
  - Sustainable agriculture and food security and maintenance provision of etc.

### **Date**

- 29 August 2014 (Friday)
- 19 September 2014 (Friday)
- 17 October 2014 (Friday)

- 21 November 2014 (Friday)
- 12 December 2014 (Friday)
- 23 January 2015 (Friday)
- 20 February 2015 (Friday)
- 13 March 2015 (Friday)
- 10 April 2015 (Friday)
- 22 May 2015 (Friday)
- 12 June 2015 (Friday)
- 10 July 2015 (Friday)
- Toro GC to have finalized the catalogue with CoT by 21 August 2014.
- Toro GC to deliver all promotional material to CoT 27 August 2014

### **Responsible Parties**

Toro GC and CoT

### **Location and dates for distribution of promotional materials**

Solomon Mahlangu leading to Mamelodi and Garstfontein Region 6–29 August 2014 (Friday)

Elias Motswaledi leading to Pretoria North, Soshanguve, Mabopane and Ga rankuwa Region 1–19 September 2014 (Friday)

Junction leading to Atteridgeville and Laudium– Region 317 October 2014 (Friday)

Junction leading to Menlyn and Garstfontein - Region 6–21 November 2014 (Friday)

Junction leading leading to Centurion and Highveld – Region 4–12 December 2014 (Friday)

Junction from Silverton to Mamelodi- Region 6–23 January 2015 (Friday)

- 20 February 2015 (Friday) -TBC
- 13 March 2015 (Friday) -TBC
- 10 April 2015 (Friday)- TBC
- 22 May 2015 (Friday)- TBC
- 12 June 2015 (Friday)- TBC
- 10 July 2015 (Friday) – TBC

The venues to be confirmed will be done after assessing the impact of the first six interventions.

**Posters** to be put up in the following libraries and customer care centers by the starting end September 2014 to end of October 2014

CoT to inform libraries and Customer Care Centers there will be 3M – A posters per venue in three different languages and full color

<b>POSTERS IN LIBRARIES –</b>	<b>LOCATION</b>	<b>DATE</b>
	Akasia -Region 1	End September 2014
	Hercules -Region 1	End September 2014
	Temba – Region 2	End September 2014
	Eskia Mphahlele Region 3	End September 2014
	Waverly Region 3	End September 2014
	Eersterust – Region 6	End September 2014
	Mamelodi west – Region 6	End September 2014



	Laudium - Region 4	End September 2014
	Olievenhoutbosch – Region 4	End September 2014
<b>POSTERS IN CUSTOMER CARE CENTERS</b>		
	Rosslyn – Region 1	By end October 2014
	Laudium – Region 3	By end October 2014
	Centurion – Region 4	By end October 2014
	Hamanskraal – Region 2	By end October 2014
	Nelmapius – Region 6	By end October 2014
	Bronkhorstspuit – Region 7	By end October 2014
	Rayton Customer Centre	By end October 2014

### Budget

R243 000.00 promotional material (this budget too will not cover all the dates planned)

R200 000.00 – poster not budgeted for

Distribution R50 000.00

**Total R493 000.00**

- **Social Media Platforms**

- Facebook and Twitter to be further discussed with The Marketing Department of CoT; from content, layout and protocol.
- Social Media will be a platform to engage with communities and encourage dialogue, change of lifestyle around the Green Economy issues and to share their ideas.

**Date**

From the beginning to the closure of the outreach programme.

**Responsible Parties**

Toro GC to initiate correspondence or communication

CoT to approve and monitor dignity and integrity of both Twitter and Facebook.

**Location**

CoT offices and Toro GC

**Budget**

R8 000.00

- **Screening of an educational, promotional and awareness video.**

The video will be screened in Government buildings where the public and communities constantly visit for services such as clinics, hospitals, licensing offices, utility account pay points.

In these buildings there should be screens where people can view while standing in queues to get their services.

The video will be an educational.

There will be messages targeting and tailor made for all communities.

**Date for the screening of the video**

The first showing will be on the 17<sup>th</sup> November 2014 (Monday)

- 31 December 2014 ( Wednesday)
- 30 January 2015 (Friday)

- 27 February 2015 (Friday)
- 30 March 2015 (Monday)
- 29 April 2015 (Wednesday)
- 29 May 2015 (Friday)
- 29 June 2015 (Monday)
- 30 July 2015 (Thursday)

### **Responsible Parties**

Toro GC to capture the video and deliver it to CoT to install / show on the suggested dates

### **Location**

Mabopane - Clinic

Soshanguve – Police station

Wonderpark- Library

Atteridgeville – Hospital

Garstfontein Library

Hammanskraal - Police Station and Utility account payment points

Tshwane Central – Utility accounts payment points and Hospital

### **Budget**

R170 000.00

- **Engaging the community through electronic and print media to share, update, create awareness and educate people in communities to encourage them to recognize their roles in the Green Economy agenda.**
  - Radio interviews, talk shows, live broadcast, print media, website, social media will be used.

**Date**

20 November 2014 (Thursday)

**Responsible Parties**

CoT to lead and give direction as to what Toro GC must do

**Location**

CoT – all seven regions to participate and South Africans in general.

**Budget**

R96 000.00 – R21 000.00 of this amount is not budgeted for.

- **Tshwane Green Ride**

- The purpose of this event is to promote healthy life styles, and to encourage the use of non- motorized modes of transportation.
- All the cyclists will start from Solomon Mahlangu in Mamelodi to the Union Buildings.
- At the starting point there will be a formal opening where there will be amongst other activities the Tuki dance and Tuki performing some
- The estimated number of cyclists to participate in this event is 300 to 500 cyclists

**.Date**

The 25<sup>th</sup> October 2014 (Saturday)

**Responsible Parties**

Tshwane Green Ride will be coordinated, managed and monitored by CoT

**Location**

It will start at Mamelodi from Solomon Mahlangu Road to the Union Building Tshwane City Centre

**Budget**

Depending on the pitch of this event the budget could be anything from R1 million to R2 million  
Sponsors could be approached.

**4. BUDGET FOR TSHWANE GREEN OUTREACH PROGRAMME JUNE 2014 TO JULY 2015 ACTIVITIES**

<b>TSHWANE GREEN SERVICE DELIVERY</b>	<b>BUDGET</b>	<b>NOT BUDGETED</b>
<b>Launch of TG Service Delivery Programmes</b>		R200 000.00
<b>Green Fridays</b>	R97 000.00	
<b>Award Ceremony- for Departments</b>		R250 000.00
<b>Social Media Platform</b>	R3 000.00	
<b>Sub Total</b>	<b>R 100 000.00</b>	<b>R450 000.00</b>
<b>TSHWANE GREEN SOUL</b>		
<b>Signing of pledge on 7 Quilts</b>	R81 200.00	
<b>Social Media Platforms – twitter and Facebook</b>	R 3 000.00	
Tuki dance at CoT planned festivals (5)		215 000.00
<b>Sub Total</b>	<b>R61 000.00</b>	<b>R215 000.00</b>
<b>TSHWANE GREEN SCHOOLS</b>		
<b>High Schools</b>		

Essays competitions - 14 schools in 3 regions	R24 000.00	R72 000.00
- Green Schools Prize Giving		R150 000.00
- Social Media Platforms	R 3 000.00	
<b>Primary Schools</b>		
- Comic strips will be distributed in 10 Schools	R 70 000.00	
- Social Media Platforms	R 3 000.00	
<b>Universities/ Tertiary Institutions</b>		
- Dialogue merged with COP 20 events to be held at UNISA		R200 000.00
- University Green Fun Days	R 88 000.00	
- Social Media Platforms	R 3 000.00	
<b>Sub Total</b>	<b>R188 000.00</b>	
<b>TSHWANE GREEN BUSINESS</b>		
<b>Fund Raising Event from Big Business to support the Green Economy Outreach Programmes–</b>		R300 000.00
<b>Tshwane Green Business Forum – Automobile industry – Encourage Green Scholarships and Bursaries</b>	R 20 000.00	
<b>Awareness Video – on business opportunities related to the Green Economy</b>	Part of the bigger video under communities	
<b>First Show Casing of the Video</b>		
<b>Video Space on CoT buildings with Screens</b>	N/A	
<b>Partner with CoT on Business Road shows – Green Economy Business Opportunities</b>	R5 000.00	
Social Media Platforms	R 3 000.00	
<b>Sub Total</b>	<b>28 000.00</b>	
<b>TSHWANE GREEN HOMES</b>		

Distribution of Educational promotional materials of the green economy / greenhomes: fridge magnets, rulers, pamphlets,	R143 000.00	R200 000.00
New Home Owners programme		R40 000.00
Greening Households – using Ngwewama Family Tips		R30 000.00
<b>Sub Total</b>	<b>143 000.00</b>	
<b>TSHWANE GREEN COMMUNITIES</b>		
Flash Mob (6 )	R129 000.00 (3)	R129 000.00 (3)
<b>Sports Events – Rugby, Soccer, Cricket</b>	R90 000.00	R75 000.00
<b>Framed Posters in Customer Service Centers (7) and Libraries (9)</b>	R100 000.00	
<b>Tshwane Green Ride</b>		R1 million
<b>Video Space on CoT buildings with Screens – Video in public buildings</b>	R 125 000.00	
<b>Electronic and Print Media</b>	R75 000.00	R21 000.00
<b>Social network platforms</b>	R 8 000.00	
<b>Video of the Tshwane Green Outreach Programme</b>	R120 000.00	
<b>Sub Total</b>	<b>647 000.00</b>	
<b>SUSTAINABILITY WEEK</b>	R237 400.00	
<b>Information and literature management</b>	R8 000.00	
<b>Distribution of all materials and contingency expenses</b>	R62 900.00	30 000.00
<b>Project Management Fee</b>		
<b>TOTAL</b>	<b>R1,500 000</b>	

## APPENDIX 1

### Quotes and Phrases

These quotes and phrases have been extracted from literature on the Green Economy – they have been classified according to the six elements of the Green Tshwane outreach programme. Toro GC awaits comments and approval for them to be used in the development of promotional material for the outreach programme.

#### a. Tshwane Green Homes (TGH)

Place a brick in the cistern-this reduces the amount of water used to flush.

Don't leave the tap running to wash your dishes or brush your teeth.

Ensure your oven door seals properly, so that heat doesn't escape; a seal is expensive to replace.



Electric hotplates and pots keep good temperature for several minutes after switching off, so turn off the stove before the cooking process is complete.

When on holidays, switch your geyser/s off.

When on holidays or away, turn the setting down on the fridge, as it won't be opened and closed regularly, thus it will retain the cold easier.

Good planets are hard to find

There is no Planet B

Your planet needs you

"What's the use of a house if you haven't got a tolerable planet to put it on?" - Henry David Thoreau

**b. Tshwane Green Soul (TGS)**

Don't be mean, be green

Live green, love green, think green

If you not using it, turn off...

When it comes to litter which side are you on?

Wash your laundry with cold water not hot water

Turn off lights before you leave the room

Act like you live here

Vote Earth

Enjoy Natural light; open your curtains and avoid turning on lights for as long as you can

Turn off your computer completely at night.

Paying your bills on line is a sanity saver

Reuse scrap paper, print on two sides, or let your kids color on the blank side of the used paper.

Conduct a quick energy audit of your home.

Learn with your kid's ways to save energy

Repurpose products it's fun; glass jars as leftover containers and bulk storage, especially in the kitchen.

Collect rain water, and use it to water your houseplants and garden.

**Going green is not something you can buy; it's a life style...**

**c. Tshwane Green Communities (TGC)**

Do you Love Where You Live?

Where we live matters. Cleaner streets, beaches and parks provide the backbone for stronger communities. How we live matters too. By preserving scarce resources, wasting less and recycling more, we create a healthier society and healthier planet too.

We, governments, businesses and people urgently need to change our ways to stop being wasteful and shift as a nation to become resourceful.

Litter is a divisive issue – you are either part of the problem or part of the solution.

Reuse, reduce and Recycle; It's that simple...

Going green is not something you can buy; it's a life style...

"We shall require a substantially new manner of thinking if mankind is to survive." - Albert Einstein

#### **d. Tshwane Green Schools (TGS)**

Schools should teach students about global warming, climate change, renewable resources and all the exciting technologies utilizing these, about recycling of solid wastes and water, and about green building.

Reduce paper; minimize the use of paper in handouts to parents. In many cases parent communications can occur through email.

When printing is necessary, use both side of the paper.

Recycling can include traditional recycling pickup of paper, metal, and glass products, as well as composting associated with a gardening program. Schools can recycle their printer cartridges, and earn money, is that easy...

Schools can go further and involve the community by creating art projects such as a mosaic mural out of recycled materials from chipped or cracked coffee mugs and other nonporous items that ordinarily would have been headed for the garbage can.

Schools gardens give students a wonderful outdoor botany laboratory, as well as education in sustainable environments, local growing seasons, and nutritional value of locally grown fruits, and vegetables.

Eat organic encourage and engage caterers for student lunches that use local and organically raised foods. Great for the environment, healthy for the kids, and even an exciting learning opportunity.

Turn off computers at the end of the day. Many schools have large computer labs, and turning them off rather than leaving them in hibernation mode, can make a significant difference to electricity consumption

#### **e. Tshwane Green Business (TGB)**

You won't have a business if you don't have a planet to do your business...Not convinced??

It pays to go green

"Only after the last tree has been cut down...the last river has been poisoned...the last fish caught, only then will you find that money cannot be eaten." - Cree Indian Prophecy

Electronic communications is not more environmentally friendly than paper. Paper is a renewable resource, produced from sustainably managed timber plantations. Just like any other crop, we plant, we harvest and we replant-260,000 new trees every day.

PaperRocks SA

Set double-sided as a default setting on your printer

Enable energy saving settings on all equipment's

Go green and show you care...

When the going gets tough, the tough go green

Go green or go home

Finding innovative methods of thriving in a green economy

**f. Tshwane In service delivery (TSD)**

Leading by example...

Leading South Africa and Africa as whole in the journey towards the green economy...

Exploiting opportunities for sustainability in the public sector...

Make conservation a work practice...

Go green or go home...

Creating sustainability conscious work force... (within the CoT)

Reduce printing by having your IT department move as many office tasks as possible to computer software or web software.

Employees can easily separate out their trash and recycling without wasting

## APPENDIX 2

### Ngewana Family – My Green Home Tips

#### **1.2. HOT WATER**

Hot water is the main reason your electricity bill is so high – and the best place to squeeze savings: No-cost options can cut water-heating costs by 10% or more right away. Some low-cost purchases pay for themselves in months. For the highest returns, invest to save – especially in solar panels or a heat pump.

#### **Things you can do**

Invest anywhere from 20 minutes to R20 000. The more you put in, the more you get out.

**WHAT THE NGEWANA FAMILY DID**

They tackled their geyser use from all sides because it was the biggest user of electricity in their home.

As one of the first 'no cost' steps in April, Lutho climbed into the roof space, where he found the geyser thermostat set to an unnecessarily high 70 degrees. With the power to the geyser switched off at the DB board, he turned that down to 60, instantly cutting the geyser's electricity usage by about 20 percent. The family also started taking shorter showers and smaller baths, as a change in habits.

**No cost Tips:****Turn your geyser down to 55° - 60°**

Most electric geysers are set to a scalding 65° or higher. Every 5 degree drop in the thermostat setting saves about 10% on water heating, improves the cylinder's lifespan – and protects your family from burns. (Stop at 55° degrees to prevent breeding bacteria.) Ready? Switch off the electricity first at the DB board, and take a torch, screwdrivers and a child. Kids love attics. (See: [How to adjust your geyser temperature.](#))

**Take a shorter shower...**

... not a bigger bath. A two-minute shower uses as little as 16 litres of hot water, consuming just a fraction of the water and energy needed for a bath. For a four-person family that could save a few thousand rands of electricity and water a year. And showers are considered more hygienic.

**Switch off the geyser when you go away**

If you are going to be away from home for a few days, a flick of the wrist at the DB board is one of the easiest ways to save. The element heats up a few times daily if you leave it on. When you get back, give the geyser a couple of hours to heat up again. With a geyser timer you can also automatically switch off for periods of the day, especially during Eskom's peak hours.

**Low Cost Hot Water Saving Tips****Things you can do**

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**WHAT THE NGEWANA FAMILY DID**

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***Below are some ideas of things you can do. If you have more ideas, join the conversation and share!***

### **Install a low-flow shower head**

Your shower may be so wasteful that it's actually illegal. Some municipalities ban shower heads that use more than 10 litres of water per minute. To check yours, do the "Bucket Test." Hold a bucket under the shower spray for 12 seconds and see if you collect more than 2 litres. Replacing an inefficient shower rose with a low-flow version could save you hundreds of rands a year. Modern low-flows are aerated, so you feel a blast of water, not a trickle. And replacing a shower rose is surprisingly easy. [This YouTube video](#) shows you how.

### **Connect a timer to your geyser**

A programmable timer can help your budget and the nation, by keeping your geyser off during certain periods like Eskom's peak hours of 5 to 9 pm. Timers are essential for solar geysers. Prices start at around R350 plus electrician, but consider paying for a [Geyserwise](#), for thermostat control without having to climb into the roof to adjust the temperature on the geyser.

### **Invest to save Tips**

#### **Install a solar water heater**

The question is not "can I afford solar?" It's "can I afford to keep paying 40 to 60 percent of my electricity bill for a job the sun can do very well for most of the year?" If the cash is not at hand, talk to your bank about using your access bond or a loan. For a family of four or more, the savings should cover the investment in about 4 to 6 years. The process of choosing an installer and panels may seem daunting, but fear not. See the [Step-by-step guide](#) to going solar. You can wait for your existing geyser to burst, but start preparing now to accelerate the process on that fateful day. *Or a heat pump water heater*

No north-facing roof? No good, direct sunshine? No problem. Heat pump water heaters are the perfect Plan B. They work like an air conditioner in reverse gear, and use less than half the electricity of a normal geyser. They cost more or less the same as a solar system and can also pay for themselves in a few years. But bear in mind that a heat pump needs annual maintenance, doesn't last as long as most solar panels and makes some noise

## **1.2. LIGHTING**

How many South Africans does it take to change a light bulb . . . ? Such jokes evoke laughter because nothing could be easier than twisting a globe into place. For that reason, there is no other component of your electricity bill that is as easy to slash by 80 to 90 percent. And there is no better time than now, because the technology of the future has become affordable today. Turn the question around. How many light bulbs does it take to change South Africa?

### **Things you can do**

Spend what you can afford today and let your savings pay for bigger investments.

### **WHAT THE NGEWANA FAMILY DID**

They found that one of the easiest ways to trim their utility bills is through lighting.

In April, their policy became: 'If it's not in use, switch off the Juice!' By lighting only the spaces they were using, they cut their lighting electricity consumption by some 20 percent. Then they slashed it even more dramatically by converting their whole house to LED globes (**Guide to Globes**) provided by **Eurolux**.

CFLs help save energy, but LEDs are the latest and greenest technology in lighting. The family didn't forget the sun, however. They invited it inside by installing a tubular skylight from **Solatube** over a dark stairwell far from windows.

***Below are some ideas of things you can do. If you have more ideas, join the conversation and share!***

## No Cost Tips

### **Switch your family on to switching off**

You already know you should turn lights off on the way out of a room. So how can you make it a habit for every member of the household? For example, try taping a piece of string from the top of each doorway to eye-level as a reminder for a month. Or start your dinner only once you have switched off the lights in unoccupied rooms.

### **Let the sun shine in**

It may seem obvious, but make it a habit to reach for the curtain or blind cord in the morning rather than the light switch. Numerous studies have shown that natural light can reduce stress and improve health and productivity, on top of energy saving potential. In the summer, however, watch out for heat build up! Close the curtains on northwest- and west-facing windows to help keep your home cool.

*When choosing interior paint, lighten up* covering walls with dark colours could double the wattage and therefore energy you need to light a room and dim the effect of natural light coming in through windows. Need more light? Choose a lighter colour. There are also paints which boost reflectivity significantly.

## Low Cost Tips

### ***Replace your bulbs with LEDs***

Light-emitting diodes (LEDs) are the lighting of the future, but you can start saving with them today. LED globes that used to cost hundreds of rands a few years ago can now be found for as little as R50, saving 80 to 90 percent on your electricity used for lighting. Even burning just 2 hours a day, the best LED deals will pay for themselves in less than a year. And they last much longer than ordinary incandescent lamps or even CFLs. LEDs are best-suited to replace halogen down lighters, but you can now find them in nearly any shape, warmer colours, reflector angles and most wattage. For detailed advice see our [Guide to Globes](#).

***Conserve cash with CFLs***

Though LEDs have advantages in lighting colour and longevity, compact fluorescent lamps remain a somewhat more affordable way to save energy. And if you need to replace a standard 60 or 100 watt incandescent globe, the equivalent twist CFLs are easier to find than LEDs. Here's a thrifty plan: Make a list of your globes and the hours per day they are used. Replace the most heavily used ones, especially down lights, with LEDs, and the rest with CFLs. With the savings on your utility bills you can buy more LEDs next year.

***Stay secure with motion-sensor lights outside***

Outdoor lights burning overnight will certainly lead to higher utility bills, but numerous studies suggest they may also light the way for criminals to do their deeds, particularly if high walls shield the property. Infrared motion detector light fittings (that switch on when something moves and stay on for a preset time) are more likely to surprise unwanted visitors, while using less electricity.

***Put light only where you need it***

Desk lamps, reading lamps and eye-level, under-cabinet fixtures for the kitchen will help you to see what you are doing better, allowing you to turn off unnecessary room lights. Ceiling fixtures often over-light rooms, often because too many down lighters are placed in areas where they're not really needed. Dimmers can help, but they save less energy than you might expect. Try 'de-lamping,' removing a bulb or two.

**Invest to save Tips*****Renovate to be LED-friendly***

LED manufacturers try to accommodate existing bulb styles and fixtures, but a renovation is a great time to let LEDs be LEDs. The technology is perfectly suited to long strips of lights that can be concealed in crown mouldings or under cabinets. Recessed down lights and track lights should be wired for mains voltage, without low-voltage transformers. Dimmable LEDs need dimmers designed for them. For long term best results, use high quality products from reputable brands, and qualified installers.

***Let the sky light dark rooms***

If you need lights on during the day, find your way to the sun. Windowless rooms can benefit from light tubes or skylights. In hot climates, skylight blinds can help avoid overheating.

**1.3. HEATING AND COOLING**

Heating and cooling is the second largest component of electricity costs for many South Africans. Before you switch on electric heating or air conditioning, give nature and technology – old and new – a chance to regulate your comfort.

**Things you can do**

These ideas and investments will help you put the heat where you want it — and keep it there.

**WHAT THE NGEWANA FAMILY DID**

They switched off their electric heaters this winter and switched on to new – and old – ways of keeping warm.

They're keeping out the cold by closing doors and windows, covering windows with thick curtains, blocking draughts with weather-stripping sealing tape, and installing a thick layer of Saint-Gobain Is over insulation above the ceiling. They're adding warm layers of clothing and using winter bedding. Instead of an open fireplace that sends heat up the chimney, their home is now cosy with heat from a closed-combustion fireplace by Calore that burns renewable energy in the form of pellets of wood waste and in preparation for a more comfortable summer; their green home makeover included heat-reflective paint from Breathecoat on their roof.

**Below are some ideas of things you can do. If you have more ideas, join the conversation and share!**

## **No Cost Tips**

### **Put your windows to work**

Any north-facing house is already built for passive solar heating, but you have to help. As soon as the winter sun is shining, open all curtains to let the warm sunshine in. But leave windows and doors tightly shut until temperatures peak in the afternoon. That's the time for fresh air. Seal up again before it gets cool in the evening, with heavy curtains or blinds on windows so you don't lose precious heat. In summer, close curtains of western-facing windows against the hot afternoon sun..

### **Dress for winter success**

Cottons are cool, but consider putting them away for the winter. Wool, fleece, down and insulating synthetics trap heat much better. Use layers for added warmth and control. Slip on another layer before you switch on the heater. We lose a lot of heat through our heads, so get hat covered. Scarves also make a big difference. Why spend money heating the whole room, when it's just your body that needs to be warm?

### **Give your air conditioner a winter job**

Though air conditioners are best avoided if possible, they do have a quirk that you can put to use in winter if you already own one: they are more efficient at heating than at cooling. Compared to ordinary electric heaters, most air-conditioners can generate 2 or 3 times more heat per watt. If located high on a wall, make sure their louvers direct the air toward the floor.

## **Low Cost Tips**

### **Put heat where you need it**

If you must use electric heat, make sure it goes only where you 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. Avoid under floor and wall heating, which waste by warming indiscriminately.

If you need to keep a room warm, an oil fin heater works well—with the door closed. Buy heaters with timers and/or thermostats to avoid wasting energy.

**Dodge the draft**

If you like fresh winter breezes, leave your windows open and bundle up. If you prefer a warm house, hunt down the drafts blowing under doors and around windows. Trace their edges with a burning stick of incense or the palm of your hand to find air leaks and block them with self-adhesive ‘weather-stripping’. Attach a ‘sweep’ to the bottom of a door to close the gap to the floor, or use a beanbag ‘snake’ or ‘sausage’. Check the ceiling for gaps where heat escapes, such as the attic hatch.

**Invest to save Tips****Give your fireplace a window**

Open fireplaces may look charming, but you can’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. Wood pellets from scrap or firewood from suburban tree fellers are also sustainable fuels. Choose a wood-burner if the romance of building a fire inspires you; pellets are for those who value convenience.

**Protect your home with adequate insulation on top**

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 and gaining too much in the summer. A layer of glass wool or blown-in cellulose made from recycled paper can cut heating costs by a quarter. If summer’s heat is your problem, foil insulation under the roof can help reflect heat away. Roof paints specially formulated to ward off the sun’s heat are also available.

**Save in summer and winter with ceiling fans**

If summer's heat is tempting you toward air conditioning, try a ceiling fan first. Not only are ceiling fans much less expensive than air conditioners to buy, they use as little as 1/10th of the electricity to run, while lowering the apparent room temperature by a few degrees. But fans don't cool the air, only the skin of the person in their breeze, so turn them off when exiting. In winter, use them in brief spurts or in reverse at low speed in heated rooms to push warm air down from the ceiling.

### **Allow summer's heat an escape route**

If you are renovating and want a cooler house in the summer, look up. Heat gets trapped at the ceiling. Installing high exterior windows and 'transom' windows above the doors between rooms can help heat flow through and out of your home. Whole-house extractor fans suck the heat out and draw in cool breezes at night. If mosquitoes cause you to close windows on summer nights, invest in screens.

## **APPLIANCES**

Appliances that create heat require the most electricity, so use them sparingly. Learn to read energy labels for sound appliance investments.

### **Things you can do**

Change both your daily habits and your most wasteful appliances to save water and energy.

### **WHAT THE NGEWANA FAMILY DID**

They discovered in their eco-audit that their laundry, stove and outlet sockets together used more than a quarter of their electricity. So they revamped some of their appliances and the way they use all of them.

The ironing pile was shrunk by two-thirds when they removed unnecessary items like pajamas. Their new A+ rated refrigerator and low-wattage LED-backlit televisions from [Hisense](#) are much more energy efficient. The LED TV model uses less than 50 watts! The



kitchen now has three green cooking features: a gas and induction combo stove from **Snappy Chef** and a **Wonderbag** insulation cooker.

The family is saving water, too, with **Lecico** dual-flush toilets that use a mere 2,4 litres for a small flush, about a quarter of the water wasted by their old toilets.

***Below are some ideas of things you can do. If you have more ideas, join the conversation and share!***

### **No Cost Tips**

#### **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.

#### **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, pajamas and exercise gear don't need the watts wasted on them.

#### **Wait for the sun, don't tumble dry.**

Along with an oven, the tumble dryer is the appliance most likely to boost your utility bill. Rather check the weather forecast and wait for a sunny day to use the washing line. If a domestic helper makes the laundry decisions, consider an incentive for lowering electricity consumption during work hours.

### **Cook without using the oven**

An oven-cooked meal can use two or three times the electricity of a stove meal. And stoves are faster. So incorporate more of your family's favourite stove-cooked or cold meals into your meal planning. Every time you rest the oven in the summer, your house will stay cooler too.

### **Low Cost Tips**

#### **Try the coolest stove – an induction cooker**

Induction stoves are the latest in kitchen appliances. They're popular with chefs because they save time by heating so quickly, but they also save electricity and the risk of burns. For high-temperature cooking an induction stove uses about 30 percent less energy than an ordinary hob. Since magnetic fields heat the pots, the stove plate stays cool, but you'll need iron or steel cookware. Take a magnet along when pan shopping. You can buy a single-plate induction cooker for just over R1 000.

#### **Add a rainy-day drying rack**

Nothing but rain in the forecast? Resist the urge to resort to the tumble drier and consider the wide range of possible indoor drying racks. Use a high-speed spin in the washing machine first to reduce drying time. Then shake out each item and smooth it before hanging, so that much of the laundry dries without wrinkles and won't need to be ironed.

***Keep cooking with the stove off***

Bring your food to the boil, turn the stove off and pop the pot into an insulated bag or box. Two locally available brands are Wonderbag and Hot Box, and they cost R200 to R400. Food slow-cooks with retained heat, so you save up to 60% on energy. Your meals won't burn, and the safety risk is reduced. Insulated cookers are great for rice, porridge, soups or stews. See great recipes online. Combine with an induction cooker to double up on the savings.

**Invest to Save Tips****Choose an efficient fridge that makes the grade**

Refrigerators vary widely in efficiency, so appliance shoppers need to check the energy label first. Labels are still voluntary in South Africa, so if you don't see a rating, assume it's not efficient. SA labels max out at A, but if you find an EU label, aim for an A+ or A++ fridge. Also look at the estimated consumption in kilowatt hours. A smaller A-rated fridge will save you more than a large fridge with an A+.

**Install a dual-flush toilet**

Old-fashioned toilets use about 9-13 litres per flush. A modern dual-flush uses just 6, or 3 for a half flush, saving a family of five at least R1 000 a year on their water bill. And the latest efficient toilets actually work better than the old water-wasters. If you can't invest in a new toilet right now, you could save water by adjusting the float in the cistern so it fills to a lower level or adding a water-and-pebble-filled 1 liter or 2l bottle. But if this causes you to need two flushes, return to the original water level.

Close up of the dual flush mechanism on the top of the new toilet. With a hand/ finger pushing the 'low flush' part for just a 'number one' (liquid not solid).

**Buy a washing machine with a cool wash attitude**

Some washing machines don't offer the option of a cold-water wash. This is a situation in which you can ignore the energy label, which only compares the efficiency of machines on a warm setting. If you can't choose cold water, an A+ machine is a B- choice.

**Go green with gas**

Whether heating a room or a pan on the stove, gas has the advantage over electricity in supplying instant heat. And gas stoves and heaters are load-shedding-proof. Their green advantage is that switching from electricity to gas cuts the carbon footprint for those appliances about in half. Operating costs using bottled LPG in 2014 are similar to electricity for those paying at least R1,50 per kWh; the lucky few in Johannesburg who can connect to Egoli Gas will save much more.

**WASTE AND TOXICS**

Out of sight, out of mind, but rubbish starts because trouble after it disappears from your pavement. Rotting waste chokes our landfills, degrading into dangerous gases and adding to everyone's municipal bills. The more you know about waste and toxics, the more you will know what to dispose of where-and what to not keep anywhere

**Things you can do**

A little bit of time and a lot of knowledge will turn your home into a lean, mean recycling machine.

**WHAT THE NGEWANA FAMILY DID.**

They turned their waste into fertilizer for the garden and jobs for South Africans, while sparing municipal landfills and the atmosphere from the burden of their refuse.

Most of the waste that used to go to the dump is separated for municipal recycling, the compost heap or the worm farm from **Wizzard Worms**. **Postwink** colour-coded bins in the kitchen handily keep recyclables and most kitchen scraps out of the rubbish. The

family is also breathing easy in their newly painted house, knowing that the no-VOC paints on their walls from Breathecoat don't contribute to asthma or smog. And they've switched to biodegradable, non-toxic cleaning products from **EcoSmart** and **Better Earth**.

***Below are some ideas of things you can do. If you have more ideas, join the conversation and share!***

### **No Cost Tips**

#### **Reduce, reuse and recycle – in the right order**

Recycling is nice, but it's not the starting point in a green home. Take a look at the glass bottle: Recycling that bottle will save some energy and mining of raw materials. But the recycled glass still needs energy when re-melted at 1 500 degrees. Reusing a bottle is better. Refilling it with water or buying returnable cool-drink and beer bottles saves the manufacturing of a replacement bottle. Reducing is best. Drink a glass of tap water instead of a bottled drink and no packaging energy or raw materials are used at all to satisfy your thirst. That's healthier for both the environment and for you!

#### **Help the recyclers by separating your waste**

Some municipalities offer recycling bags for curbside collection in some areas. Some communities have private businesses that will pick up your recyclables for a fee. But nearly all South African neighbourhoods have an army of informal recyclers working hard to process our waste. Give them all a hand. Valuable paper and corrugated cardboard becomes worthless if dirty. Separate them to place beside your bin. Putting aside plastic bottles, food tins and aluminium cans also spares hawkers from digging in your bin. Glass is usually too heavy for recyclers' trolleys. Save it to take to a glass recycling bank.

**Keep toxics out of your cupboards**

The list of unhealthy chemicals in cleaning products is very long, and few labels list every ingredient, but you can make a start at greening your cleaning with a few basic guidelines. First, only buy and use what you really need. Fabric softener and furniture spray for dusting are relatively easy to live without. Second, avoid a few common ingredients: ammonia (ammonium hydroxide), formaldehyde (or formalin) and bleach (sodium hypochlorite). Third, look for unscented and low-odour products; if it has a strong smell or fragrance, it's better not to breathe it in. Fourth, avoid sprays, which increase the quantity of chemicals you can inhale. If you want more detailed information on chemicals in your cupboards, see this [EWG Guide to Healthy Cleaning](#).

**Low Cost Tips****Keep your biodegradables in the biosystem.**

One of the most dangerous myths about the environment is that it is better to send something biodegradable to a landfill than something that won't decompose. That's mostly a load of rubbish. Deep in a landfill, food and garden waste – especially grass clippings – break down into methane, a potent greenhouse gas. Composting at home or sending greens for municipal composting preserves both the climate and precious landfill space. For composting kitchen scraps, worms are nearly miraculous fertilizer manufacturers. 'Worm farms', usually special tray structures, cost about R1 000.

**Use microfiber instead of chemicals for cleaning**

The purest cleaning chemical of all is H<sub>2</sub>O, and a relatively new kind of cloth makes water an effective cleaner too. Microfiber cloths are made with fibers 100th the diameter of a human hair, split to make them grab hold of dust, oils and dirt better. The smoothest microfiber cloths, slightly dampened, can clean windows, TVs and PCs without any chemicals. Follow up with a dry microfiber cloth to polish. Microfiber mops and dusting cloths can reduce or eliminate the need for chemicals for most of your other household cleaning. They can be washed repeatedly, but not with fabric softener. Find them alongside dish cloths in most large shops.

**Breathe easy with low-VOC paints**

Your nose knows Volatile Organic Compounds, even if you've never heard of VOC's. They create the 'new car smell', most 'air freshener' type scents and the odour of fresh paint. Many VOC's are also responsible for smog and irritation or damage to eyes, lungs and other organs. Some cause cancer. It's easy to keep air fresheners out of your home, but until recently, you had little choice when painting. Now you do. Most manufacturers sell low-VOC or no-VOC versions of their paints. Some companies sell only no-VOC products.

**Invest To Save Tips**

Buy quality and keep it

The 'embodied' energy that went into making the stuff in your cupboard may be even greater than the energy that goes into your geyser. Make sure that you buy only what you need and buy it for keeps. Look for quality in everything from fabrics to construction, for cell phones and PCs that can be easily upgraded and appliances from established brands that keep spare parts available. Every time you opt to repair rather than replace, you keep jobs in South Africa, resources in the ground and pollution out of the air.

Upgrade your tap water

South Africa's major cities pride themselves on excellent drinking water quality. Avoid bottled water which wastes energy, plastic, money, even water – as 3 litres are used for making each 1 liter bottled. If tap water taste causes you to buy bottled water, improve the taste at the tap. An activated-carbon filter can remove the chlorine taste and will quickly pay for itself as you stop buying water at the shops. The bottled water you buy may be only filtered tap water anyway.

OUTDOOR AND TRANSPORT

You may be going greener in your home, but step outside. A thirsty garden and pool can be a major part of a home's water budget, and the pool pump is an ideal place to cut electricity consumption. Improving how you travel to and from your green home is also key to lowering your total footprint.

### **WHAT THE NGEWANA FAMILY DID**

They are saving both water and energy outdoors.

The pool pump used to be their second highest electricity consumer (after the geyser), but they slashed its energy use by more than 80 percent by switching to an efficient **Speck variable-speed pump** and reducing operating hours. Backwash water is now sent to a settling tank to be reused. Bathing and washing water also gets recycled onto the garden through a grey water system from **Water Rhapsody**. Cape Contours is assisting with the landscape plan for water-wise plants and a food garden, and **Reliance** is providing the organic compost. An **Aquatrip** water monitor prevents unseen leaks from wasting water.

Up on the roof, solar photovoltaic panels installed by **Citrine Energy** will soon be supplying free, renewable energy from the sun to cover some of their daytime electricity needs.

They're also investigating more energy-efficient forms of transport. Lutho is enjoying the electric bicycle from **Cycology**, and Thulisa has test-driven a hybrid car.

***Below are some ideas of things you can do. If you have more ideas, join the conversation and share!***



**No Budget Tips**

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. With such long run times, your pool could be one of your biggest power users, as the Ngewana family found out. Research shows that 4 to 6 hours are enough in summer for most pools and just 2 to 3 hours in winter. Every pool is different, so add an hour if the water does not stay clear.

Get on your bike and ride (or walk)

Short car trips worsen both pollution and fuel consumption per kilometer – by as much as 50 percent – because the engine hasn't warmed up. Fortunately short trips are perfect for a healthy ride or walk. So try this option whenever possible. Traveling under your own power can actually save you time if you use it to replace exercise sessions. If hills, distance or sweaty weather are keeping you from cycling, consider an electric bike.

Water wisely

Clever gardeners save water and keep their plants beautiful by limiting when and where they water. Young plants need water while taking root, but most established plants and lawns can go dormant and live without water in South Africa's dry-winter regions. In wet months, rainfall is usually sufficient. You need to water only if a finger pushed 5cm into the soil finds no moisture. Then soak the bed deeply every other day at most. Watering in the heat of the day causes evaporation losses and is illegal in some municipalities; try early morning or evening instead. And focus your irrigating on just the most visible and thirsty patch of your garden.

### **Low Cost Tips**

Use public transport and save

Once you have car you might as well use it, right? Not so fast. For most cars, the [AA Vehicle Rates Calculator](#) will tell you that each kilometer costs well over R1,50 – just for petrol, tyres and maintenance. Switch a daily commute of 30 km each way from that costly car to the modern Bus Rapid Transit systems in Johannesburg or Cape Town and you could save more than R15 000 a year. Even the Gautrain saves that much when you factor in e-tolls. The savings for the air that our children breathe is priceless.

Indigenize your garden

Local is lekker in the garden. Birds and butterflies are attracted to the wild plants they know, and you can cut water consumption greatly with plants that are adapted to your climate. The [National Gardens](#), found in most metropolitan areas, can help with advice and even seedlings. Reduce lawn space and ask about replacing your thirsty kikuyu lawn with more water-wise native varieties, e.g. buffalo grass in the coastal Cape or couch grass in the Highveld. Group plants according to their water needs so that you can concentrate irrigation on a smaller area.

Grow some of your own food

Here's a scary thought: Much of the money you spend at the shop on food is used in ways that harm the environment. It pays for chemical fertilizers, pesticides, irrigation, truck transport, refrigeration and more. The food you grow in your garden, nourished with your own compost and pesticide-free, carries virtually none of that burden. Ask your kids if they would like to help. The cost? For the price of a bag of tomatoes, you can buy a seed packet for a summer's worth of tomatoes.

## Invest to save Tips

### Buy a more efficient pool pump

The best-kept secret in home energy savings is what's called a variable-speed pool pump. While most pool owners are using 750-watt and 1 100-watt pumps, these new models use about 150 to 300 watts 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 within a few years as your utility bills drop by some R2000 a year. What's more, variable-speed pumps are whisper-quiet and long-lasting.

### Make your next car CO2-tax-free

A car dealer might not mention it, but most vehicles come with an often-hidden tax of thousands of rands imposed cars and bakkies that emit more than 120 grams of carbon dioxide per kilometer. The higher the emissions, the higher the tax. The CO2/km number is listed on a new car's windscreen sticker, but you can start hunting for CO2-tax-free, greener options on the [National Association of Automobile Manufacturers](#) website. Almost every make has at least one model below 120 grams/km – including nearly all hybrid cars. Avoiding the tax is just the beginning of years of savings at the petrol pump.

### Cover your pool

You don't want your pool to turn green, but you do want it to be green, so consider ordering a floating cover. Uncovered, a typical 30m<sup>2</sup> pool will lose tens of thousands of litres of water each year to evaporation, adding more than R1 000 to your water bill. A

cover also cuts chemical use roughly in half and keeps the pool a few degrees warmer. A heavy-duty, opaque cover lasts longest and controls algae by starving them of sunlight.

#### Generate your own sun power

Solar photovoltaic (PV) panels can be the next step for households that have already done everything possible to reduce electricity consumption. A PV system will pay for itself in several years if you keep it simple. Batteries can almost double the price, so unless you really want to go off the grid, you can start with a basic system like the Ngwewama family has, to cover most of your consumption during daylight hours without storing for night-time.

Source: My Green Home: <http://mygreenhome.org.za/webisode/outdoor-transport/>. Accessed: 18/08/2014