

# Solar water drive steams ahead



*Writer: Mbulelo Baloyi*

**A**bout three years ago, South Africa's energy challenges were brought close to home when households and large industry alike had to ration their electricity supply through a programme called load-shedding.

State power utility Eskom had to implement load-shedding across the country to avert blackouts.

Since then, Eskom has rolled out a comprehensive programme of building new power stations and revitalising those power stations that had been mothballed (decommissioned in the past).

The power utility has embarked on an energy-saving programme to meet a national target of ensuring that in two-years' time (2013), 10 000 gigawatt-hours of energy would come from renewable energy.

Renewable energy includes solar (sun) power. With our sun-soaked weather throughout the whole year, Eskom believes that South Africans can save a substantial portion of their electricity costs if they were to switch to solar energy to heat water.

Solar power is clean and has no direct emissions. Solar panels

can be used almost anywhere in South Africa and are suitable for low energy use such as lights and television.

To encourage households to switch to solar energy for water-heating purposes, Eskom offers rebates on a portion of the installation and purchase costs of a solar heating system.

To qualify for a rebate from Eskom, consumers must have a timer on the solar geyser so it does not switch on during periods of peak electricity consumption or when the sun is available to heat the water.

In addition, the solar geyser must be accredited by Eskom. Consumers will not get a rebate if they use a supplier not accredited by Eskom.

The solar geyser has to be appropriate for use in the area in which it has been installed. This relates to size and protection against frost and must be compatible with the quality of water supplied in the area.

Eskom also requires that the solar geyser be comprehensively guaranteed for five years. It must also pass the South African Bureau of Standards (SABS) tests and comply with the South African National Standards requirements in terms of thermal and mechanical performance, as well as safety.

Suppliers of the solar geyser have to be registered members of the solar water-heating division of the Sustainable Energy Society of South Africa.

## Do the sums

### Eskom's rebate to you for switching to solar

A solar geyser system for an average family of four costs about R27 000 and the rebate is between R7 000 and R9 000. A slightly smaller system of 200 litres costs between R19 000 to R20 000 and the rebate will be about R4 800.

## The saving you will make

Water-heating contributes significantly to the entire cost of a monthly electricity bill. According to Eskom, opting for solar energy could see households saving between 50% and 70% of the water-heating bill.

**Eskom says a 150-litre solar-water heater can save 4,5 kilowatt-hours of electricity per day.**

## Energy facts

**About 1 800 megawatts in electricity consumption were saved over the past six years due to energy-efficient lighting, according to Eskom. This is enough to power a city the size of Durban.**

**Between 2004 and 2010, about 43,5 million compact fluorescent bulbs were rolled out as part of Eskom's National Efficient Lighting Programme.**

To determine the amount of rebate that solar geyser buyers get, each solar geyser system tested by the SABS gets a rating. This rating indicates the kilowatt-hours of electricity that could be saved by the solar geyser on an average day.

The departments of energy and of human settlements have committed to ensure that all new housing projects will have to be installed with solar water-heating units.

During April last year, President Jacob Zuma launched the National Solar Water-Heating programme in Winterveldt, north-west of Pretoria. Speaking at the launch, he said: "People use various methods to heat water, ranging from a stove, kettles and pots to water geysers for those who can afford them.

"Fortunately, water should not necessarily be heated by electricity. There are other cheaper and cleaner forms of energy to do the job. We want to spread the message that we can all enjoy free hot water, while at the same time saving money and the environment.

"In government, we are converting water-heating for hospitals, clinics, prisons, barracks and other government buildings to solar water-heating. You will see a lot of that happening in the next few years."

During 2010, the Department of Energy set a target of installing 50 522 solar water heaters. The target for 2011 is 111 356. For 2012, the target is 215 984 while 311 099 and 402 530 are installation targets for 2013 and 2014 respectively. This will result in one million solar geysers being installed by 2014.

A provincial breakdown of the rebate programme shows that the Eastern Cape, Gauteng and the Western Cape have the highest number of installations with 5 511, 5 660 and 4 274 installations respectively. These solar geysers were installed between November 2008 and December 2010. Mpumalanga, the Free State and Limpopo show the lowest figures with 261, 1 172 and 197 installations respectively. Across all nine provinces the number of geysers installed reached just over 52 000 by January 2011.



# Creating a culture of innovation in government

Gone are the days when innovation was the sole preserve of the private sector and academia. In its continuous pursuit to enhance service delivery, government is changing the innovation landscape with outcomes benefiting both the public and the private sector, writes **Mbulelo Baloyi**.

**A**t its most basic, “innovation” is associated with renewal, or a new way of doing things. The ultimate objective is to find better and simpler ways of doing things.

In keeping with this, the Centre for Public Service Innovation (CPSI), established by government in 2001, defines innovation as “applied creativity that is contextually relevant”. The definition acknowledges that public servants can, and must, be creative to drive government’s outputs, specifically in improving service delivery.

Established under the auspices of the Ministry of Public Service and Administration, the CPSI’s primary objective is to support and nurture innovation in the public sector. It consistently provides the Ministry with independent, diverse, and forward-looking research findings and advice on service-delivery innovation.

The CPSI strives to unlock innovation in the public sector and create an enabling environment for improved and innovative service delivery that will benefit the end-user – largely, the public that receives government services.

The Centurion-based centre acts as a facilitator for the un-

earthing, development and implementation of innovative ideas within and throughout the Public Service in all three tiers of government. The CPSI’s cross-sector reach allows it to act as a resource to the whole of government, crossing institutional boundaries.

The centre also creates a climate in which innovation is encouraged, prized and rewarded. This is achieved through its robust Public Sector Innovation Awards Programme that culminates in an awards ceremony held annually in November.

The awards celebrate and recognise the successes of individuals, teams and departments in the quest for a more effective, efficient and accountable government through the effective application of innovative approaches, methodologies and tools.

The CPSI is one of 29 online regional and international centres of the United Nations’ Public Administration Network Portal (UNPAN). It remains one of the top uploaders of documents and other relevant material to the portal. An active network of knowledge champions from the Southern African Development Community countries is convened

once a year by the CPSI to build capacity, share experiences and address challenges.

The centre has received international recognition for its contribution to public sector knowledge and innovation management. Last year alone, it was awarded the UNPAN 10-Year Anniversary Award for Outstanding Performance in Knowledge Management at the Workshop on Harnessing Knowledge Management through Web 2.0 Tools in Shanghai, China. It also received an award for Leadership Commitment to Knowledge Management.

Thuli Radebe, CEO of the CPSI, says: "Each of us is a knowledge worker and a learning champion in this knowledge economy. We all have a role to play in turning the Public Service into a 'learning public service for quality service delivery'".

**For more information, visit [www.cpsi.co.za](http://www.cpsi.co.za)**

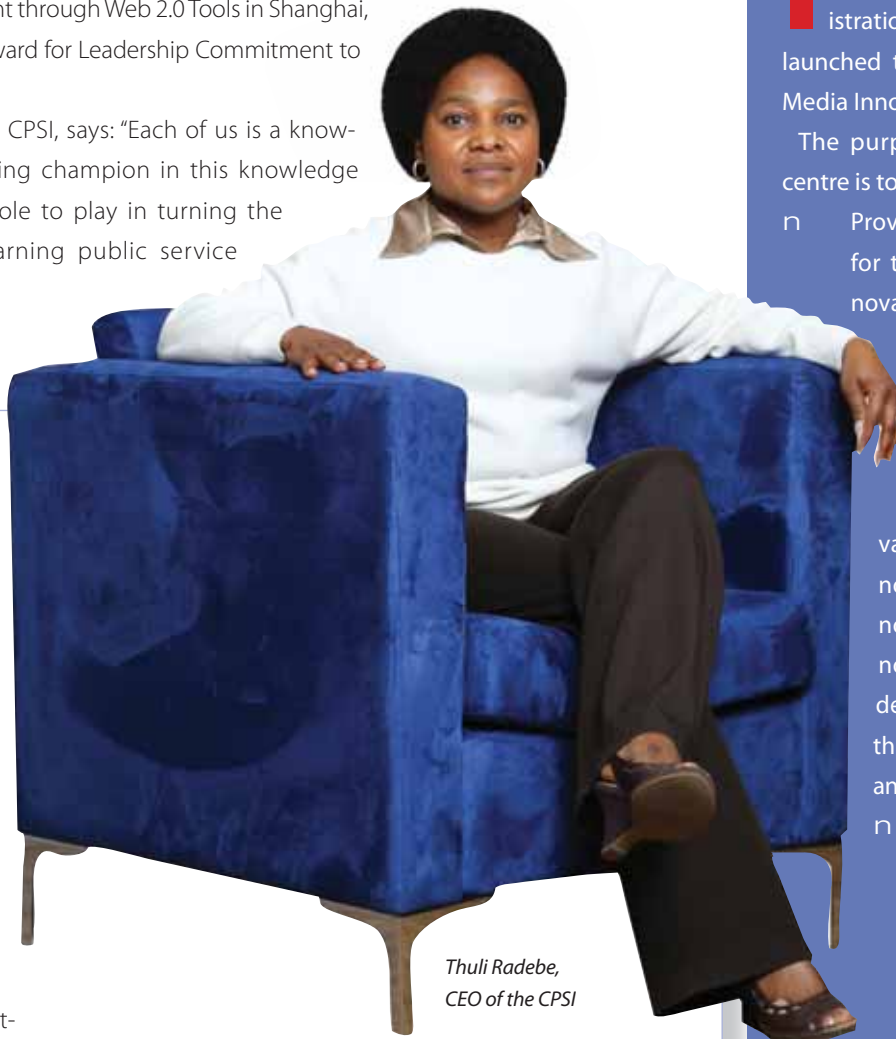
## Innovation at work

Recognising the blockages that have hampered effective service delivery, the Centre for Public Service Innovation (CPSI) has, since inception, sought to develop sustainable models for innovative service delivery.

The scope of innovation applied by the centre is diverse. One example is the development of a foam manifold chemical fire-fighting system with the City of Johannesburg's Emergency Services. The system is widely used in the petroleum industry where a special foam is effective in extinguishing fire caused by burning chemicals. This system earned the Emergency Services the Public Sector Innovator of the Year award in 2006.

Another example is that of Mindset Network, a television educational programme initiated by pay television network, Multichoice, in partnership with a number of other corporate companies. Through Mindset Network, Multichoice developed tools to provide teaching and learning support material and resources using television connected by satellite for rural areas.

These stories reflect only a slice of the CPSI's offerings. It also works outside the country in the interest of innovation. Opera-



*Thuli Radebe,  
CEO of the CPSI*

tion Rachel saw the South African Police Service (SAPS) partnering with the Mozambican police to stamp out the proliferation of firearms used in criminal activity in South Africa. This innovation saw units of the SAPS going into Mozambique where they worked with the local police to seek arms caches that were stashed away at the height of the civil war in that country. Once found, the weapons, including AK-47 automatic assault rifles, hand grenades, landmines, rocket-propelled grenade launchers and other small arms were destroyed.

This innovation earned the SAPS an award in the category of Innovative Service Delivery Projects involving the South African Government's Partnership with other Southern African Development Community Governments in 2004.

## How public sector managers can benefit

In June last year, the Minister of Public Service and Administration, Mr Richard Baloyi, launched the Public Sector Multi-Media Innovation Centre.

The purpose of the innovation centre is to:

- Provide a learning platform for the public sector on innovation implementation, in support of government's efforts to encourage a culture and practice of innovation. This will be achieved through various repositories of innovation experiences, innovation projects and innovators embodying and demonstrating practically the concept of innovation and all its ramifications.
- Provide space and a platform for public servants, away from their offices, to interrogate their specific challenges, and explore and incubate solutions in a multi-stakeholder environment.

This will be achieved through an incubation solution centre, allowing both public and private sectors to conceptualise, incubate, develop and pilot public service solutions to identified challenges. The Multi-Media Innovation Centre is a platform where different stakeholders (public sector, private sector, different sector experts and academia) explore and find innovative solutions to improve public service delivery.

*For more information or to schedule a visit, contact the CPSI at 086 000 CPSI (2774).*

# Building BRICS:

Writer: Clayson Monyela

## Broadening South Africa's international leadership

In 2001, Jim O'Neill of Goldman Sachs – an international economic research organisation – coined the term BRIC in an article entitled *Building Better Global Economic BRICs*. This term referred to the emerging (developing) economies, namely, Brazil, Russia, India and China, that would, according to this analysis, reshape the world's political and economic landscape. In 2009, the elected leadership of these four countries met for the first time in Yekateringburg, Russia, and formally declared their membership of this economic bloc. An acronym coined by an economic analyst then became a reality and, more importantly, a mutually beneficial political and economic entity. Fast-forward to April 2011 when President Jacob Zuma will meet, for the first time, with leaders of the BRIC nations in Beijing, China, as the Republic of South Africa has been endorsed with membership of this economic and political entity in December 2010, leading to an entity now called BRICS.

### What is BRICS?

The BRICS group represents spheres of political and entrepreneurial coordination, in which member countries have identified several business opportunities, economic complementarities and areas of cooperation. These emerging markets were seen as collectively able to usurp the G8 (Canada, France, Germany, Italy, Japan, the United Kingdom, Russia and the United States of America) within 50 years. In simple terms, the markets and the strength of these countries were developing (and continue to do so) at such a rapid rate that their attractiveness to corporations and investors from capital-rich nations increased significantly. The flow of trade and investment in the BRICS countries is undergoing an intense process of transformation and member countries are now global investors, as their economies were able to overcome the global financial crisis and they have become a source



Rank	Country	GDP (PPP) (USD)	GDP(nominal) (USD)
51	Russia	15,807	10,521
71	Brazil	11,289	10,471
76	RSA	10,505	7,101
93	PRC	7,518	4,283
127	India	3,290	1,176

(Source: IMF, 2010)

of stability to the global economy. These investments were (and are) positively changing the lives of the people of these countries. It was projected that from 2010 to 2013, the BRIC(S) member countries would be the ideal destination for corporate expansion. Prior to the acronym's materialisation, each of the BRIC(S) countries was developing strongly and in 2001 (excluding Mexico, the only



non-BRIC country), they each accounted for more than one per cent of the global emerging market output. Each BRIC country had shown robust urbanisation, industrialisation and modernisation, along with rising incomes and living standards – shaping the global commodity markets. The materialisation of the acronym into reality has given an elevated voice to the global dialogue that aims to achieve economic transformation.

### Why did South Africa join?

BRICS ultimately is a platform to represent the voices of the emerging markets. The member countries of BRICS are working together to ensure that the international political and economic landscape changes to reflect a more just world order. This group represents the voices of the emerging world and South Africa, as a gateway to the African continent, with the most sophisticated economy, a strong corporate identity and institutional maturity, joined BRIC(S) to aid in transforming our country, our continent and the world for the better. In the words of the Minister of International Relations and Cooperation, Maite Nkoana-Mashabane:

“The age of globalisation requires that we elevate these partnerships to a different level, building on the wells of goodwill and solidarity, and generate mutually beneficial economic relations. We share similar perspectives about the reform of global governance, in particular the imperative for enhanced representation and a voice for developing countries in decision-making processes. Significantly, we share a common view that multilateralism and a rules-based global governance mechanism is the best guarantor of stability, and provides a better framework for asserting our values and interests.”

The 2010 BRIC Summit Joint Statement focused on, among other things, the reform of global governance, the work of the G20, international trade, development, energy and climate change. These are issues of global concern, which have been an important component of South Africa’s foreign policy for many years. By their very nature, they are also challenging and require flexibility, adaptation and alliances to advance them. Importantly, South Africa has garnered experience on these themes which can be shared within BRICS for mutual benefit. On global governance, South Africa, India and Brazil seek to be permanent members of a reformed United Nations Security Council, to which Russia and China already belong. All five coun-



tries are advocates of reform of the international financial institutions. The agenda set by the two BRIC summits also means that we should move away from seeing BRICS today only in its original conception by O’Neill. The countries came together and set an agenda for themselves, which might not be what O’Neill originally conceived when he coined the term.

Beyond the global issues mentioned above, South Africa could benefit from the concrete projects of BRICS in areas such as agriculture, science, statistics, development finance institutions, security and justice. BRIC agriculture ministers have agreed to cooperate in agricultural technology development and exchange. Under the auspices of BRIC, meetings of the scientific and research centres of the four countries had been convened. These are just two examples of some of the specific sectoral initiatives from which South Africa could benefit through its participation in BRICS.

Which country would miss out on an opportunity to cooperate with Russia, China, India and Brazil on agricultural technology development and science? These will also complement the work of IBSA (India, Brazil and South Africa).

While the discourse on BRICS has focused on the sizes of the economies, populations and future projections of stature, there are other important attributes which South Africa brings to the group. The 2010/11 *Global Competitiveness Report* of the World Economic Forum ranks South Africa favourably in relation to the other BRIC countries. The 2010 *United Nations Conference on Trade and Development World Investment Report* puts South Africa in the top 20 of priority economies for foreign direct investment in the world. Among developing countries, South Africa is still the biggest investor in the African continent. This means that although our economy is small in relation to other BRICS members, we have attributes that have positioned us well in the world and which will allow us to bring special insights into the work of BRICS.

It also goes without saying that since our foreign policy prioritises the African continent, we are uniquely placed to bring the African perspective to the many global forums in which we participate.

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