

# eSEED

## Note from the Editor

Welcome to the autumn edition of eSEED. With winter looming on the horizon, the national electricity grid is set to take some strain. Progressive cities and metros are doing their level best to assist in easing this tension through a focus on mass solar water heater rollout programmes and other pioneering energy efficiency initiatives. There are big plans afoot, including national solar water heater regulations. City solar water heater targets, programmes and actions were outlined in the SEED/City Energy Support Unit (CESU) network meeting held earlier this year.

The SEED programme has an important milestone to mark: it has reached its 12<sup>th</sup> year of groundbreaking work with cities in developing and embedding sustainable energy development policy and action into all facets of city planning, including building a 'cadre' of energy professionals in South Africa. A celebration event was held to reflect on SEED's achievements and excellent innovation with cities over the last decade. A compelling short film called "Tomorrow's Cities," which encapsulates the essence of the SEED Programme, was launched at the event.

Happy reading



*-Zanie Cilliers (SEA)*

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CITY ENERGY SUPPORT UNIT

*a south african sustainable energy and climate protection initiative*

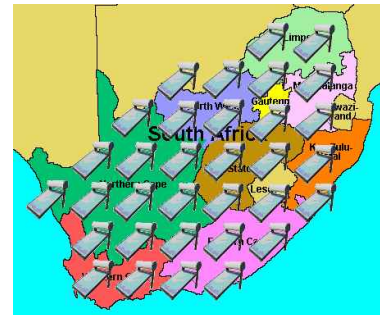
## 1. Cities give a clarion call for solar water heater installation at SEED/CESU network meeting

City officials from electricity, finance, environmental, building and planning departments across numerous metros and municipalities convened at a cities network meeting in February this year, hosted by the City Energy Support Unit (CESU), in partnership with SEA's REEEP Solar Water Heater Project and the SEED programme. Their goal was to identify, clarify and plan city efforts towards meeting the National Solar Water Heater (SWH) target of 1 million units installed by 2014, as set by the Minister of Energy, Dipuo Peters.

The network meeting was originally set to focus on the role of municipalities in developing appropriate SWH by-laws to support the Minister's SWH target. Shortly before the network meeting, SEA received information from the Department of Trade and Industry that government may introduce national legislation for efficient water heating in buildings by June 2010. The National Building Act (currently only concerned with health and safety) is to be amended to include energy efficiency regulations, which are drawn from SANS 204, a document containing voluntary energy efficiency standards for buildings. International experience has shown that SWH regulations are the single biggest factor in massive acceleration of SWH adoption.

Within the context of this recent development, the discussion focused on whether cities should continue to forge ahead with the development and implementation of SWH by-laws and rollout projects, instead of waiting for national government to lead the way through the implementation of the proposed national legislation and the national SWH strategy. City by-laws may not be necessary if a national law is promulgated.

However, government processes may take a long time, e.g. SANS 204 has not been finalised after 5 years. Cities were keen to pursue their own SWH initiatives regardless, as it was felt that this was an issue that could not be delayed any longer. The City of Cape Town would continue work on its solar water heater by-law, as it was felt that important lessons could still be gleaned from this process.



*A vision for South Africa: solar water heaters everywhere!*

A groundswell of momentum is building up behind SWH rollout. Many cities have already taken steps towards SWH rollout and have set their own targets. The network meeting served as a platform for cities to discuss the various innovative approaches to SWH rollout under development in their respective areas. Cities agreed to use the CESU platform to submit the output of the workshop discussion formally to national government for integration into the National SWH Strategy, as well as to lobby for the passing of national legislation for efficient water heating in all new buildings across South Africa. Cities also tasked CESU to explore options with regard to a collective SWH marketing campaign.

The workshop output documents can be found here:

[www.cityenergy.org.za/resources/network-meeting](http://www.cityenergy.org.za/resources/network-meeting)

## 2. The SEED programme turns 12!

The evening of the SEED/CESU network meeting day was held over for a special celebration: the SEED (Sustainable Energy for Environment and Development) programme has entered its 12<sup>th</sup> year and 4<sup>th</sup> phase.

The programme began in 1998 and is the oldest energy-focused NGO initiative in South Africa. It emerged out of the policy engagements of civil society in the energy arena within the new democracy and aligned itself closely with the electrification and housing initiatives of the new government. The programme works to build the capacity of government (human and institutional) with an emphasis on local government to introduce sustainable energy approaches into the development of South Africa.

The 12-year-old SEED Programme has been dynamic and responsive to local, national and global changes, shifting emphasis from sustainable housing to city energy strategy development and pioneering mechanisms for mass rollout of sustainable energy interventions. In its current phase, SEED continues to build on its legacy of integrating energy and environmental concerns into urban development through its work in supporting sustainable urban resilience; the focus of which is to reconceptualise the structural underpinnings of our cities – spatial, transport and infrastructure planning – as the fundamental basis to achieve a low carbon future.

The keynote address at the celebration was fittingly given by Osman Asmal, the Executive Director of Environmental Resource Management (ERM), City of Cape Town, who has been involved with the SEED programme almost from the very beginning.

The SEED programme has received funding throughout its years from DANIDA (Danish International Development Agency).

In a letter from the Embassy of Denmark, Development Counsellor Carsten H. Laugesen notes that SEED is “a special and exceptional success story and the Embassy of Denmark has been proud to be part of your [SEED’s] efforts and development,” and that SEED “was way ahead of its time” in its initiation in 1998.



Peta Wolpe (SEA director) and Osman Asmal (City of Cape Town ERM director) at the exhibition stand

Well-wishes were also received from cities in attendance and from afar. A letter from Sol Plaatje Municipality’s Municipal Manager, G. H. Akharwaray, stated that through SEED’s “pro-active and dedicated approach you [SEED] were inspirational and instrumental in mobilising this municipality onto the pathway leading to its vision of eventually becoming a ‘Solar City!’”

The celebration event also profiled an inspiring exhibition developed by SEA and which featured at the pre-COP 15 climate change exchange in Copenhagen in December 2009. The exhibit showcased the pioneering sustainable energy work undertaken by cities through the DANIDA-supported National Urban Environmental Management Programme of the Department of Water and Environmental Affairs.

## DVD launch – Tomorrow's Cities

The SEED celebration event also saw the launch of "Tomorrow's Cities," an inspiring film produced by Luke Younge for Sustainable Energy Africa. It presents a compelling and easy to understand account of the major developmental challenges facing our cities in South Africa and, more broadly, cities of the global south.

Framed within these challenges the film unfolds a vision through the voice of a school child and exciting use of animation and proposes practical solutions towards achieving breathable, sustainable, equitable and low carbon urban futures.



The documentary can be found on the City Energy Support Unit website:  
[www.cityenergy.org.za/tomorrows-cities](http://www.cityenergy.org.za/tomorrows-cities)

## 3. How are cities contributing towards solar water heater rollout?

Cities are not waiting on the implementation of National Solar Water Heater legislation before taking action. They are forging ahead with SWH implementation through various innovative projects and programmes.

### 3.1. Nelson Mandela Bay Metropolitan Municipality – Zanemvula subsidised housing solar water heater pilot project

In June 2008 the Electricity and Energy Directorate of the Nelson Mandela Bay Metro (NMBM), piloted a large scale solar water heater (SWH) project geared at government-delivered housing. This pilot was created as part of the NMBM's Go Green Initiative, which in itself was a response to Eskom's proposed Power Conservation Programme, where the aim is to reduce demand-side consumption levels. Zanemvula settlement was identified as an ideal location for a project of this kind. Implementation began in April 2009; with 1000 solar water heaters installed to date and a further 300 installations planned. The Zanemvula experience is intended to inform future large-scale rollouts at a national level.

The City Energy Support Unit (CESU) has and continues to bolster this initiative with detailed technical and capacity-building support. For example, CESU conducted a series of workshops in the area in May 2009, the focus of which was to educate and create awareness about the use of energy in a household, as well as to discuss the SWH interventions. The learning garnered from these workshops was used by CESU to develop a comprehensive SWH installation guide, which is being used by NMBM to create material for its SWH education and awareness campaign. The NMBM's Education Unit is targeting its education and awareness campaign at individual households and schools in the area by utilising community development workers. CESU will be providing a Train the Trainers workshop for these workers.



*Councillor Tokota of NMBM's Infrastructure, Engineering and Energy portfolio, addresses beneficiaries at the SEA co-ordinated SWH workshops held at Zanemvula*

## Solar Water Heater Installation Guide: for low-income communities

The City Energy Support Unit (CESU) together with the SEED Programme has developed a Solar Water Heater (SWH) Installation Guide as a resource to support municipalities in the rollout of SWHs to low-income households. The guide includes:

- the financial, health and social implications of SWH adoption by low-income households
- technical information on SWHs, as well as technical specifications to be considered in SWH rollout to low-income housing
- community engagement processes, including beneficiary selection, the running of community workshops, and expected frequently asked questions
- technical and social monitoring and evaluation, including the provision of a baseline and follow-up community questionnaire

The guide was recently distributed to all city partners who attended the SEED/CESU network meeting. It is hoped that the guides makes a compelling case for the inclusion of SWHs in government-delivered housing and serves as a useful resource for city officials.

The guide can be found, along with other SWH-related materials, on the CESU website:  
[www.cityenergy.org.za/resources/solar-water-heaters](http://www.cityenergy.org.za/resources/solar-water-heaters)



*Solar water heaters abound in Zanemvula*

## 3.2. City of Johannesburg – Cosmo City solar water heater implementation

170 solar water heaters (SWHs) were mounted on the homes of Cosmo City residents in 2007 as part of the first phase of the Cosmo City project, which aims to promote liveable and climate-resilient human settlements. The second phase of this project, undertaken by the Environmental Management Department of the City of Johannesburg (CoJ) and supported through the DANIDA-funded UEMP Programme, entered the implementation stage in January 2010.



*A solar water heater being mounted in Cosmo City*

As a consequence, more homes in Cosmo City will be fitted with a range of sustainable energy interventions namely SWHs, insulated ceilings and compact fluorescent lamps in 700 homes. A variety of greening and water conservation applications will also be undertaken, including fruit and indigenous tree planting on homeowner stands, the promotion of community vegetable gardening and the piloting of rainwater harvesting.

The SEED Programme closely supported CoJ with the development and implementation of this project through providing technical input, building capacity and research. In addition, CESU's guide on SWH applications for low-income communities is currently being utilised by CoJ to inform the education and awareness component of the Cosmo City project.

### 3.3. The City of Johannesburg and Nelson Mandela Bay Metro swap notes on solar water heater rollout

A SEED/CESU-facilitated learning exchange opportunity in March 2010 brought together officials from the City of Johannesburg (CoJ) and the hosts Nelson Mandela Bay Municipality (NMBM) to share and capitalise on their experiences in solar water (SWH) education and awareness-raising initiatives.

NMBM shared its experience of SWH implementation in Chetty, where the Zanemvula project is located, whilst officials from the CoJ spoke of lessons learnt from the Cosmo City project (see above articles). The meeting included a site visit to Zanemvula to view the SWH project undertaken by the Metro. Delegates were also exposed to the local site office operations and responses to malfunctions of the SWH systems in this community. NMBM officials explained the technical aspects of SWH installation as delegates visited households with SWHs. Methods for the accurate and safe placement and installation of solar collectors and other SWH components were brought to the attention of the delegates. Challenges encountered during installations were also discussed with the attendees; such as poor workmanship, unstable roof structures, breaking roof tiles, etc.

Important outcomes that emerged from this rich learning engagement included the sharing of best practice experiences on how the education and training awareness programme can be structured to include schools, councillors, the community and all municipal departments. The importance and urgency for a shift away from a siloed working approach with energy and environmental sustainability issues common to departments within NMBM, to an increasingly integrated and collaborative working approach across departments was highlighted. Also emphasised was the need to develop information on energy and environmental issues in a manner that can be easily understood by civil society.

On climate change education it was highlighted that it is imperative to localise global problems so that people are able to clearly understand and participate in the discussions and decision-making. Participants from the Department of Education emphasised the need to work in close partnership with municipalities in the community development and school-based education and awareness-raising programmes.

The NMBM's Education Unit is seeking to roll out its education and awareness campaign to individual households and five schools in the area in partnership with the District Department of Education. Materials are currently being developed for Community Development Workers to raise knowledge and awareness in communities about SWHs. The CESU and SEED programmes will be providing a 'Train the Trainer' workshop for these workers.



*City officials in deep discussion during the SEED-facilitated NMBM-CoJ Learning exchange event: (from left-to-the right) Jeffrey Sampson (Education Dept); Luyanda Vice (CoJ); Nomusa Mnguni (NMBM); Lisa McNamara (CoJ); Steyn van der Merwe (NMBM); Belinda (NMBM); Koltana Pumla (NMBM); Pierre-Louis Lemercier (Renewable Energy Centre)*

### 3.4. City actions towards solar water heaters on a large scale

Some cities and municipalities are planning to roll out SWHs on an unprecedented scale for South Africa. Cape Town, Johannesburg, Ekurhuleni, eThekweni and Nelson Mandela Bay municipalities are all at various stages of a Request for Proposals (RFP) process to enable the large-scale penetration of SWHs in the middle- to high-income residential sector.

The rollout model varies according to each city. Generally a fee-for-service model is used, where the city supplies the SWH and the homeowner makes a monthly payment (set at less than they would have spent on their electric geyser water heating costs) that is included in their rates bill. In most cases the homeowner will own the SWH after a set time period. Installation and maintenance is contracted through the private sector.

RFPs have been sent out by Nelson Mandela Bay Metro and the City of Johannesburg, while the rest of the cities/municipalities are in the RFP development stage. Targets include:

- Nelson Mandela Bay: 60,000 SWHs in mid- to high-income households over 5 years.
- Ekurhuleni Municipality: 256,000 SWHs. Implementation to commence by July 2010.
- City of Cape Town: 300,000 SWHs in mid- to high-income households by 2014.

Sustainable Energy Africa, through the REEEP (Renewable Energy and Energy Efficiency Programme) SWH project team, has been involved in giving technical support to cities on the RFP process.



## 4. CESU climate change talk at Cape Nature Champions' Forum

The CESU and SEED team from SEA were invited to address the Cape Nature Champions Forum on the impacts of climate change on biodiversity and how this in turn will affect peoples' lives. The Champions' Forum is the platform where community and conservation champions are brought together from the six Cape Flats Cape Nature sites.

While SEA's expertise is not in biodiversity or conservation, the idea was for the team to facilitate a workshop that addressed the phenomenon of climate change in a manner that was accessible to the communities represented at the Forum. Exploration was encouraged through discussion on the impact of climate change on biodiversity and the relationship the represented communities share with the biodiversity and conservation sites.

The workshop was interactive and brought to light what climate change means; expanding on its causes and impacts, with a focus on biodiversity.

To help bring the issue closer to home, participants' own contribution to climate change was demonstrated by having everyone participate in a carbon footprint exercise, which included an assessment of lifestyles and calculations of carbon emissions incurred by each individual. This helped bring the problem back to what 'we' as individuals can do to effect change in our own lives to contribute to the solution, instead of being a part of the problem. The workshop concluded with a viewing of SEA's documentary 'Tomorrow's Cities,' to focus discussion on how the attendees thought climate change would particularly affect their communities and what they could start doing to become part of the solution.

*Cape Nature Champions' Forum members learning about climate change*

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Please let me know if you would like to be removed from the list or suggest recipients to whom eSEED would be of interest. You can also send news of projects relating to housing, environment and energy in which you are involved. Comments and suggestions are welcome.

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