

A young child with dark curly hair is looking over a wooden fence. In the background, there is a building with a corrugated metal roof. A large white sack is suspended from the roof by ropes. The entire image has a warm, golden-yellow tint.

## SUSTAINABLE ENERGY

Within this theme, UEMP focuses on renewable energy (RE) and reduced energy consumption. South Africa's National White Paper on Renewable Energy (2003) sets a target of 10 000GWh of energy to be produced from renewable energy sources (biomass, wind, solar and small-scale hydro) by 2013. This implies that RE's contribution to the total energy of South Africa will increase from 1 to 4 % in 10 years. Municipal partners are drawing up related strategies and conducting specific interventions. For example, eThekweni has set up a catalogue of renewable energy sources tailor made for the city. Strategies and roll-outs reduced energy consumption are supported in line with national strategies and local contexts, challenges and opportunities. With support from the Programme, eThekweni has set up an energy strategy for the city and the city municipality is planning further research and implementation in the field. Overall, the Programme is contributing to the coordination of all municipal efforts to use energy more sparingly and intelligently.



1

## Sustainable Energy Cape Town ENERGY EFFICIENCY CAMPAIGN

### Objectives

- To create awareness about climate change.
- To effect behavioural changes related to energy efficiency.
- To contribute to broader sustainability goals.

### Contact person

Jo-Anne O'Shea  
021 487 212  
joanne.o'shea@capetown.gov.za

### Timeframe

One year

### Funding

R300 000

### Background

The issues of climate change, energy efficiency and sustainability form the backdrop for this campaign, which forms part of a much larger 'Smart Living' campaign. The project's main components are: a website, corporate sustainability pilot, exhibition and training toolkit.

### Process

The corporate campaign, known as the Smart Living Corporate Campaign, aimed to create solid buy-in to the concept of sustainable practices within business. The following four businesses participated in the first phase:

1. Fairfield Tours (small)
2. Handyman Milnerton (small)
3. Spur (large)
4. Vineyard Hotel and Spa (medium)

A second component entailed the development of training toolkits and a supporting exhibition. Five toolkits were developed, covering the themes of sustainability, climate change and energy efficiency. These overviews are aimed at industry, schools and City of Cape Town's own staff. Related training presentations are made according to the audience profile. It is expected that the pilot training and toolkits will serve as a blueprint to be adapted over time in response to evolving needs.

A supporting exhibition is made up of four boxes containing objects that are used to improve energy efficiency, such as a low-flow shower head, can crusher and solar panel. The idea behind the exhibition is to show people practical examples of implementing energy efficient methods in the home or workplace.

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1. Lightbulb comparison
  2. 'Smart Living' products
  3. Solar water heater



2

3



The website component entailed creating a set of energy efficiency-themed pages for the City of Cape Town portal. With little existing, relevant content on the site, the project staff went about researching and developing nine menu items for the 'environment' sub-pages. Not wanting to 're-invent the wheel' the team gathered existing information on policies and strategies, also collecting links related to energy efficiency and climate change. Dedicated staff were employed to build the web resources, and they worked with various City departments to compile the content. Information is focused around what the resident or consumer needs to know about energy efficiency, with practical resources

readily accessible to users looking through the site. Content is also aimed at City staff, and items include: green buildings, products and suppliers, useful web resources, contacts, strategic documents, events, and an energy calculator. Internally, the site was launched via a newsletter carrying energy tips and links to the site. The pages can be viewed at [www.capetown.gov.za/environment](http://www.capetown.gov.za/environment) by selecting Smart Living Handbook.

#### **Lessons and outcomes**

Project staff struggled to gain commitment from businesses to participate in the corporate campaign. Staff and managers were keen but also hesitant to take on



the process in addition to their core business responsibilities. Project staff had to actively sell the benefits to top management, who tended to stall decision-making. Large corporates like Woolworths and Pick n Pay were approached, although project staff found the smaller companies easier to get on board.

Spur responded enthusiastically to the project, and is updating its corporate policy in line with the City's recommendations. The company is introducing a 'Smart Living' component to its Canyon Kids birthday club, and undertaking water audits at all of its restaurants. This is quite a feat, considering that Spur franchises are individually owned, resulting in an extra level of decision-making.

The exhibition has been successfully used on many occasions at conferences and events. The toolkits are being rolled out and City staff is being trained to help test the kits in practical situations, particularly at businesses.

The website team report that working within the City's existing template created a constraint and left little creative leeway. Recent migration to a new IT platform was problematic, with the result that project staff are unable to monitor statistics for their individual web pages, although historical data shows that the City's site receives plenty of traffic. The new platform also made the updating process slower.

After launch, problems were experienced with the

## ENERGY EFFICIENCY CAMPAIGN

'product and supplier' section, with many companies requesting inclusion and the City having no way to evaluate them. A disclaimer has subsequently been published, protecting the City from claims and complaints.

According to project manager Jo-Anne O'Shea, the main lesson learned from this campaign is the importance of maintaining momentum and ensuring that activities are carried out by scheduling weekly follow-up meetings.

An award function was hosted on the 19th of February 2009 to say thank you to the companies that participated in the first phase and to welcome the new companies to the second phase.

The second phase of the project has begun, with the following companies expressing interest in participating:

1. ACSA (large)
2. Coca-Cola Canners (large)
3. Colour Tone (small)
4. CTICC (medium)
5. Engen (large)
6. Khayelithsa Cookies (small)
7. Pick 'n Pay (large)
8. Santam (large)
9. Woolworths (large)



### BALANCED SCORECARD \*

1 – inadequate, 2 – needs improvement, 3 – adequate, 4 – good, 5 – excellent

INPUT	1	2	3	4	5
1. Did you have adequate internal resources to implement your project?	●				
2. Did you have adequate funding for your project?	●				
3. Did you have adequate technical expertise to implement your project?				●	
<b>Total</b>	<b>13</b>				

EXTERNAL	1	2	3	4	5
1. To what extent did the project impact on vertical national - provincial - municipal linkages?		●			
2. To what extent did this project improve linkages (horizontal) with similar UEMP partners?	●				
3. Did the project have a higher than expected impact on stakeholders?				●	
<b>Total</b>	<b>7</b>				

UEMP VISION & GOALS	1	2	3	4	5
1. To what degree did your project have a focus on poverty reduction?	●				
2. To what extent was this project relevant to the targeted beneficiaries?				●	
3. To what extent will this project be replicated sustainably in the future?					●
<b>Total</b>	<b>10</b>				

INTERNAL	1	2	3	4	5
1. Did you have adequate support from management to implement this project?		●			
2. To what extent did the project link with other priorities of the organisation?					●
3. Did the project have higher a than expected impact in your organisation?		●			
<b>Total</b>	<b>8</b>				

OUTPUT	1	2	3	4	5
1. To what extent did your project have tangible benefits?					●
2. To what extent did you project fulfil its aims?			●		
3. Was this project a cost effective response to the problem addressed?				●	
<b>Total</b>	<b>12</b>				



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**URBAN SUSTAINABLE ENERGY FOR ENVIRONMENT AND DEVELOPMENT (SEED)**

**Objective**

- The broad objective of the phased Urban SEED project is to support and build the capacities of cities to integrate sustainable energy approaches into urban development practices and activities.

**Contact person**

Megan Anderson  
 021 702 3622  
 megan@sustainable.org.za

**Time frame**

Phase 2: 5 years  
 Phase 3: 2 years

**Funding**

Phase 2: R6.5 million  
 Phase 3: R2.5 million

**Background**

The Urban SEED project has been running since 1998. When the initiative began, energy was largely invisible on the city management agenda. The project's aim was to raise awareness and capacitate officials, from various city departments, to manage energy issues. Phase one of the project entailed placing SEED advisers in city government environmental departments and NGOs, with an initial focus on sustainable energy in housing. Advisers were jointly managed by SEED and organisation line managers. The project successfully capacitated both advisers and managers.

Phase two of Urban SEED focused on developing holistic, city-scale energy strategies and plans for Cape Town, Tswane and Ekurhuleni, as well as working closely with two smaller local authorities – Sol Plaatjie (Kimberly) and Tlokwe (Potchefstroom). Again, the approach favoured internal capacity-building over external consultants. SEED intervention first began in the cities' environmental departments as these were more socially orientated and poverty-focused. Later, interactions began with engineering and electricity departments - the traditional home of energy in city management. These departments and SEED have since developed a close working relationship. In addition, a highly effective learning exchange network meets twice a year, enabling municipal and national line departments to interact and talk to each other about energy issues, policy and legislation changes.

Phase two also produced State of Energy in South African Cities 2006 - a baseline study of 15 South African cities and their energy profiles. The report looks at the economy, environment and government in relation to energy, and uses international indicators to analyse the 15 cities. Broad conclusions include:

- South African cities make-up around 40% of national energy consumption and are thus significant players in the national energy equation.



*Photographs: Mark Lewis*



- Within the study cities an average of 16% of city dwellers still do not have electricity. In more rural towns, such as King Sabata Dalindyebo (Umtata) this is as high as 60%.
- South African city carbon emissions are high (similar to London and Berlin) in relation to a low economic production level. The reasons for this include: mainly coal-generated electricity, low cost of electricity, high wastage of electricity, and massive transport emissions (mostly from cars).
- The report also showed that city governments were just beginning to establish a sustainable energy agenda.

### **Implementing energy strategies**

Although municipalities were adopting new sustainable energy strategies, they were struggling to break new ground and get their strategies into action. Reasons included a lack of specialist legal and technical knowledge, as well slow institutional change and risk-averse decision-makers. The DANIDA-funded, phase three of Urban SEED aimed to address some of these issues and help cities to implement their energy strategies and plans.

One of Cape Town's key strategies is the implementation of a solar water heater by-law that will require all

new buildings to install solar water heaters instead of traditional geysers. The intervention is within the scope of the city's responsibilities and the proposal is energy efficient and financially viable. SEED brought together experts from Denmark, Sustainable Energy Africa and University of the Western Cape to help the City of Cape Town develop the by-law. Implementation has been delayed by constitutional set-backs and political problems, with legal responsibilities being passed back and forth between provincial and local levels, but it is anticipated that a breakthrough is imminent.

Another city-level strategy is the energy efficient retro-fitting of public buildings and facilities, notably installing efficient lighting and air-conditioning systems. Usually, energy service providers will install new hardware at little or no cost, instead receiving income linked to electricity savings. However, city finance offices are concerned about financial regulations constraining initiatives in which private companies derive income from municipal assets. This forces cities to carry the high capital costs of retrofitting and creates a barrier to implementation of the strategy.

At a workshop held in Tswane, SEED and city representatives explored the new government strategy of providing free basic alternative energy. Cities currently allocate free basic electricity and the new policy enables



them to allocate free alternative energy where communities are not grid-connected. However, no additional funds are allocated and cities expressed at the workshop that it was politically and administratively not an option for them to allocate part of their electricity budgets elsewhere. Alternative energy sources are also far harder to deliver. For instance, the price of gas is unregulated, making it difficult to accommodate fluctuations in pricing models. Government has no infrastructure to deliver gas and, even if delivery is undertaken by an external service provider, there is still an issue around how to register users outside of a fixed grid.

Institutional change is an important prerequisite to implementing progressive energy strategies. Internationally, cities with independent (city and business funded) energy agencies tend to be most successful but this model looks difficult to replicate in South Africa given the requirements of the Municipal Finance Management Act which inhibits municipal funding of such an organisation. Pursuing the closest alternative, SEED instigated the establishment of a Cape Town Energy Committee. This is the country's first high level municipal political committee with a purely energy agenda. Cities are also in the process of establishing dedicated Energy Units and integrating energy goals into

work streams throughout the city via Integrated Development Plans and official's scorecards.

### Activities

The kind of activities undertaken in the SEED project include:

- Holding workshops on energy efficiency and alternative energy.
- Training and capacity-building, including development of a one week Master's level course with Energy Research Centre and African Centre for Cities, at University of Cape Town.
- Specialist research, compiling of legal opinion, drafting of by-laws, policy and strategy, developing energy options and modelling, and providing technical advice.
- Lobbying national government on aspects affecting city energy (like the inclusion of ceilings in low-income housing) and on municipal energy issues.
- Establishing exchange networks, on-going liaising and building of relationships between departments and government tiers.
- Sourcing and providing expert opinion and advice, for example, on the constitutional role of local government.

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**URBAN SUSTAINABLE ENERGY FOR ENVIRONMENT AND DEVELOPMENT (SEED)**

### Outcomes

Capacity-building at the heart of SEED and the programme has successfully up-skilled advisers who are now well-versed on issues related to climate change and energy. One previous SEED advisor is currently a policy analyst with the Department of Environmental Affairs and Tourism. According to project manager Megan Anderson, "Participation in the programme definitely equips advisers with the ability to move into more senior positions. Developing the human resources of municipal departments has also helped change the profile of public sector employees working with energy, and the exchange network meetings are consistently attended by 15-20 people."

As a direct outcome of the SEED programme, some eight cities now have energy strategies in place. The establishment of the Cape Town Energy Committee is considered a breakthrough, and the State of Energy in South African Cities 2006 report and Master's training course are significant achievements.

### Challenges

Two clear challenges emerge from the SEED project. First: the pace of change at city-level is slow, departments are under-capacitated, and decision-making is a lengthy process. Second: the relationship between local and national government can be challenging. Energy is cross-cutting and relates to a number of city and national departments making inter-governmental relations on energy issues logistically difficult. Although Sustainable Energy Africa coordinates an energy network, it has no official or political standing and relies on goodwill for cooperation between government tiers. At times, this constrains its ability to successfully lobby, support and capacitate government.

Fortunately, South Africa's electricity crisis created an opportunity for SEED to promote its alternative energy agenda, with research taking place into wind farms and solar thermal facilities. Global trends and the profile of climate change have also made it relatively easy to introduce a climate agenda and this is now a national priority.



## BALANCED SCORECARD \*

1 – inadequate, 2 – needs improvement, 3 – adequate, 4 – good, 5 – excellent

INPUT	1	2	3	4	5
1. Did you have adequate internal resources to implement your project?					●
2. Did you have adequate funding for your project?					●
3. Did you have adequate technical expertise to implement your project?				●	
<b>Total</b>					<b>14</b>

EXTERNAL	1	2	3	4	5
1. To what extent did the project impact on vertical national - provincial - municipal linkages?				●	
2. To what extent did this project improve linkages (horizontal) with similar UEMP partners?					●
3. Did the project have a higher than expected impact on stakeholders?				●	
<b>Total</b>					<b>13</b>

UEMP VISION & GOALS	1	2	3	4	5
1. To what degree did your project have a focus on poverty reduction?				●	
2. To what extent was this project relevant to the targeted beneficiaries?					●
3. To what extent will this project be replicated sustainably in the future?					●
<b>Total</b>					<b>14</b>

INTERNAL	1	2	3	4	5
1. Did you have adequate support from management to implement this project?					●
2. To what extent did the project link with other priorities of the organisation?					●
3. Did the project have higher a than expected impact in your organisation?					●
<b>Total</b>					<b>15</b>

OUTPUT	1	2	3	4	5
1. To what extent did your project have tangible benefits?				●	
2. To what extent did you project fulfil its aims?					●
3. Was this project a cost effective response to the problem addressed?					●
<b>Total</b>					<b>14</b>