

## SUSTAINABLE ENERGY NEWS on EMAIL (SENSE) number 8

Welcome to the eighth edition of the email newsletter – Sustainable Energy News (SENSE) – a service of the Sustainable Energy and Climate Change Partnership (SECCP), a project of Earthlife Africa Johannesburg, in partnership with WWF, Denmark.

SENSE is published monthly and we welcome any feedback and submissions. It is edited by Erika Schutze (Research and Information Co-ordinator) and Mette Nedergaard is assistant editor based in Denmark.

Please let us know if you wish to be removed from this list or suggest recipients for the list or if you would like to receive our separate Climate Change email newsletter, CCEN, edited by the climate change facilitator, Mamashoabathe Noko.

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### 1. SECCP News

#### **"Sustainable energy is clean and safe, and it saves money" – SECCP's radio competition**

During the week of August 12 to 16, SECCP will be hosting a radio competition on SAFM's Tim Modise show in which listeners can win a solar water heater, a solar pool heater, a sun stove and several compact fluorescent light bulbs. The prizes will be awarded on Friday 16 August, but discussion around sustainable energy in general, with an emphasis on energy efficiency measures that can be adopted by the general public, will be raised throughout the week. The aim of the competition is to persuade the general public to adopt energy efficiency practices, and to increase use of solar water heaters by those than can afford them. Overall the competition will draw attention to the fact that consumption patterns and over-consumption is as much of a sustainable development challenge as lack of energy for the poor. Prizes have been generously donated by Solar Heat (dylan@solar-heat.co.za); Sunstove (Margaret Bennett - sunstove@iafrica.co.za) ; Bonesa (Barry Bredenkamp) and Sun Command (Terry Cole - Tel 011 315 2320 ). Tune in at 94.7FM between 8am and 9am, Monday to Friday. (See end of this document: *Why a Solar water heater as a first prize?*)

#### **Pre-WSSD Sustainable Energy Symposium**

SECCP is hosting an energy symposium for Southern African decision-makers and people involved in energy development and/or interested in better energy practice and addressing climate change on **13<sup>th</sup> AUGUST** 2002, 8:30 a.m. to 5.30 p.m. followed by 'cheese and wine' at the Development Bank of South Africa (DBSA), Midrand. There will be presentations on the national and international context & initial report of the SECCP / EDRC Research Study of Policies and Measures for Renewable Energy and Energy Efficiency in South Africa. Guest speakers include MEC Mary Metcalf, GDACEL (Gauteng Department of Agriculture, Conservation, Environment and Land affairs); Prof Dieter Holm (Sustainable Energy Society of South Africa – SESSA); Nasimul Haque (Fellow, Bangladesh Centre for Advanced Studies - BCAS); Mamashoabathe Noko (SACAN National Co-ordinator); Steve Sawyer (Greenpeace International); Mette Nedergaard (SECCP, WWF-DK).

#### **"Getting to Grips with Sustainable Energy"**

SECCP booklet available – a 74-page booklet intended to provide introductory information and to raise awareness of sustainable energy potential, developments and technologies. Overall, it emphasises the combined long-term social, environmental and economic benefits of renewable energy and energy efficiency.

Focusing on the South African and third world experiences, it provides definitions and descriptions of different renewable energy technologies and energy efficiency measures, case studies of local/southern applications of such technologies, outlines and status of some of South African government initiatives, and some civil society advocacy positions. The booklet will be useful for all people interested in the energy choices facing South and Southern Africa. NGO activists pursuing the goals of social and environmental justice will benefit from the more advanced policy discussions and could use the exercises as training tools. For copies contact: [seccp@earthlife.org.za](mailto:seccp@earthlife.org.za)

### **Bookmarks available for free**

Don't be seen at WSSD without SECCP's funky bookmarks: the "2020 Energy Vision" and the "Save energy, save money, increase access" guide to living an energy efficient life. Contact Lerato on [seccp@earthlife.org.za](mailto:seccp@earthlife.org.za).

### **T-shirts available**

If you're energy and climate change conscious, volunteer to help with the SECCP stall at NASREC and you can get one of our limited edition long-sleeved groovy SECCP T-shirt Emblazoned with our logo and lettering that says:

"Power the World with Sustainable Energy – save money, save energy, extend access", for free.

Contact: [richardw@earthlife.org.za](mailto:richardw@earthlife.org.za). Alternatively, you could just buy one.

## **2. SA's renewable energy progress**

### **SA representatives prominent at 1st annual wind conference**

The 1st World Wind Energy Conference and Exhibition held from 2nd to 6th of July in Berlin was an outstanding success. 530 delegates from 52 nations attended, 150 exhibitors showed their goods and expertise.

For South Africa in particular, this conference was a significant milestone: SA filled 14th place in attendance figures, well ahead of China and India.

The opening address by DME Director General Sandile Nogxina was very well received. He was accompanied by Sandile Tyatya and Kosi Lisa of the Department of Minerals and Energy, showing real commitment by our Government to wind energy in South Africa.

In the side event Continental Forum for Africa and Arab Countries, Lulamile Xate gave a presentation on the situation of the technology in South Africa.

Joe Asamoah of Enerwise unfortunately was forced to cancel his visit to Berlin on short notice and Herman Oelsner of the South African Wind Energy Association (SAWEA) presented on his behalf: "Potential Resources, Obstacles and Constraints of Wind Energy in South Africa".

After intensive negotiations during the conference, the bid for holding the 2nd World Wind Energy Conference in 2003 was awarded to the African Wind Energy Association, which proposed Cairo and Cape Town.

It was further decided to postpone the official announcement of the conference venue and date with the Earth Summit in Johannesburg next month, being the ideal occasion for the announcement of the 2003 World Wind Energy Conference and Exhibition. This would enable the WWEA members to enter into further discussions with other stakeholders like the American and the European Wind Energy Associations to support and strengthen the African Conference.

At the Earth Summit, there will from the world community be strong focussing on Africa in general and especially South Africa with regard to future initiatives paving the way for sustainable development. Download the World Wind Energy Associations manifesto that was drawn up at the event, the "Global Strategy for Wind Energy" that formulates the basic conditions for the proliferation of wind energy at [www.wcaccess.co.za/~sawea](http://www.wcaccess.co.za/~sawea).

## **3. World Summit on Sustainable Development (WSSD)**

### **Corporate Accountability Conference**

August 20-22

Various NGOs and activists will be holding discussions during this conference including Groundwork (SA's experiences); Friends of the Earth; Greenpeace (Bhopal Principles); CorpWatch (India & U.N.); Bus Riders Union; Global Community Monitor (Bucket Brigade); Rising Tide; Climate Justice; Third World Network. There

will also be a cocktail evening including addresses and stories from the ground by recipients of the Goldman Prize; the Corporate Accountability Greenwash Awards; and the launch of a few publications: "The GroundWork Report 2002: Corporate Accountability in SA"; A series of five publications focusing on SA and Environment in a globalising world ; and "EarthSummit.biz" – a book on corporate abuse and the U.N.

### **Implementation Conference on Sustainable Development**

August 24-26

Opening plenary session is at 9am Indaba Hotel Johannesburg. For an agenda contact Marcus Hill Stakeholder Forum (Formerly UNED); e-mail: [mhill@earthsummit2002.org](mailto:mhill@earthsummit2002.org)  
[www.earthsummit2002.org/ic](http://www.earthsummit2002.org/ic) and [www.stakeholderforum.org](http://www.stakeholderforum.org)

### **Economy, Environment and Society - World Forum on Sustainable Development.**

August 27-29, 2002

A Parallel Event for the UN World Summit on Sustainable Development  
Birchwood Executive Hotel, Johannesburg, South Africa

### **Interdisciplinary Policy Research on Sustainable Development**

The International Research Foundation for Development, Inc. holding a forum to focus on a wide range of issues pertaining to scientific research (technical, economic, politico-cultural and social) implementation, good practices for replication, and creating viable partnerships for sustainable development among stakeholders at all levels. Details and Online Registration: Please visit IRFD website: <http://www.irfd.org> <<http://www.irfd.org/>> (<http://www.irfd.org/events/wf2002/intro.html>)

International Research Foundation for Development, Inc; Cambridge. E-mail: [neville@irfd.org](mailto:neville@irfd.org) or [info@irfd.org](mailto:info@irfd.org)  
<http://www.irfd.org>

#### **Other events worth diarising:**

DME renewable energy round table: Aug 28

SECCP side event at NASREC: Aug 27 from 9-11 am

Global Forum commission: "Energy& Climate Change"; Aug 29 from 2:45-5:45pm

### **The filthy three threaten the Summit**

World leaders will gather in Johannesburg, for an event meant to spark new commitments and action to save the environment and its people. However, governments - led by the "filthy three": US, Australia, and Canada - are selling out. They're working overtime to ensure the summit fails to deliver any real commitments on key global issues such as water, energy, health, agriculture and biodiversity.

## **4. General Sustainable Energy News**

### **Mexican utility reform crashes against Constitution**

President Vicente Fox's desire to privatise the generation and distribution of electricity - something he said was vital to Mexico's modernization - has crashed head-on into the Constitution, which declares utilities of vital national interest and makes them the domain of the state. On Tuesday, the opposition refused to support any effort to privatise the power industry, insisting change in the utility system may only be accomplished through legislation consistent with constitutional principles.

Fox and his National Action Party (PAN) have argued that the industry needs to be privatised because the government lacks the resources to maintain it properly. The opposition terms Fox's plan "an attack on national interests" and will only go along with fine-tuning to permit private investment in certain complementary activities.

Though PAN legislators strongly differ, they have agreed to seek compromise regarding regulatory legislation. "We have not reached agreement on amending the constitution - we differ on that point - but there is an explicit willingness to change other legislation," said Felipe Calderon, the leader of the PAN delegation in the lower house.

Senators from the opposition Institutional Revolutionary Party (PRI) and Party of the Democratic Revolution (PRD) urged Fox to send his utility reform bill to Congress "as soon as possible" so that it reaches the floor before the next legislative session, in September.

PRI and PRD legislators are willing to accept private investment in specific parts of the industry as long as it does not run afoul of the Constitution.

"Reform won't conform to the president's taste," Manuel Bartlett said.

"The government should introduce its bill immediately so that we may apply ourselves to the task of changing regulatory legislation," Jesus Ortega said, adding that "the PRI and PRD are prepared to start working on it tomorrow."

The Fox administration suffered a setback several months ago when the Supreme Court struck down as unconstitutional a decree issued last year authorizing private companies to sell their surplus electricity.

"Electric energy must retain the status of strategic national resource," the justices' opinion read.

Mexico's constitution, which defines the provision of electricity as a "strategic" national industry and thus the exclusive domain of the state, bars private concerns from participating in either the generation or distribution of electric power.

Authorities estimate the industry requires an annual investment of some \$5 billion to satisfy the demand for electric power, which is expected to grow at a 6 percent annual rate for the next 10 years.

The government, the business community and most financial analysts insist on the urgent need to overhaul the industry so as to permit access to private capital, inasmuch as state resources are increasingly inadequate.

### **The world's deadliest cargo**

Two British freighters carrying enough plutonium to make 50 nuclear bombs are now on route through the Pacific ocean. The ships will pass South Africa then up to the Irish sea before reaching their final destination at a nuclear reprocessing facility in Sellafield. Along their entire route the ships will face opposition by ordinary citizens in small boats and governments terrified at the prospect of an accident or deliberate attack. The deadly freighters, Pacific Pintail and Pacific Teal, will soon face opposition by a citizen's flotilla of small ships in the Tasman Sea.

**Global fuel cell energy generating capacity will increase** to near 16,000 MW by 2012 from 45 MW in 2002. Although there is still only one true commercial stationary fuel cell product in the marketplace, the competition level has increased dramatically in the last year according to the latest study from Allied Business Intelligence (ABI). A key trend in the stationary fuel cell industry has been the shift from research and development to the establishment of manufacturing plants, according to ABI's findings in the new study, "Global Stationary Fuel Cell Markets- A Detailed Analysis of an Emerging Industry."

"The heightened level of competition has been forcing companies in the field toward introducing meaningful early commercial products into niche markets," said Atakan Ozbek, ABI's Director of Energy Research and report author. The study findings show early adopter markets such as wastewater treatment plants, telecommunication back up centers and data centers will be the first markets that will see stationary fuel cell products deployed.

## **5. SA Energy Bills & conferences**

### **Integrated National Energisation Programme**

The Department of Minerals and Energy Affairs (DME) has finally realised what SECCP has argued all along – that simply extending the national grid will not supply equitable and sustainable access to energy. At a parliamentary portfolio committee hearing DME announced that it had outperformed its RDP target by managing to connect 2.7million 1994 and 1999. In the process it learnt that people were using far less than the 350 KWh per month it had assumed people would use for the simple reason that one's income determines one's consumption level. As a result the Department found it difficult to recover the capital cost of the infrastructure. The same applies to schools in the rural areas where the lack income generating capacity results in non-payment.

For this reason DME has concluded that there is a need to accelerate consumption and has decided to shift its focus from establishing as many electricity connections as possible to enabling people to pay for the electricity, ie the focus has shifted toward sustainability of these connections and therefore the socio-economic development of these communities.

Thus the available funds would be spent differently, as one would now also have regard to the impact of the electricity on the lives of the people. The trade-off is that fewer people will be connected in future. For example, instead of spending R40 million on electrifying many households, it will be spent on electrifying one milling plant. Although there would be fewer connections more jobs would be created, enabling people to pay for electricity. This economic development would require co-ordination between the different Departments.

The DME has identified priorities for the future. There needs to be integration between the Plans of the DME and those of the other Departments. There should be a continued focus on backlogs. The DME should also concentrate on the rural areas (which are the priority areas identified as developmental nodes). The Department will aim to get as many connections as possible with the available funds. There should be harmonisation between the grid and non-grid electrification programmes, ie. where the consumer has no access to grid s/he would be able to use non-grid.

The DME's plans for 2002/3 include allocating funds to municipalities with licenses. Eskom allocates to those without licenses. R120 million will be available from German funding. This will be used for renewable energy and poverty alleviation. The DME has to ensure that they have enough capacity for service delivery.

SECCP has always claimed that a viable solution to energy poverty is to provide a variety of renewable energy option (not just the expensive solar home system option) because renewable energy technologies are labour intensive, directly producing more jobs than fossil fuel or nuclear development. Renewable energy can be set up at an affordable cost in small units and is therefore suitable for community management and ownership, unlike the nuclear and fossil fuels plants, which will always belong to big companies and state-owned enterprises like Eskom. And, the demand for renewable energy is growing globally and so it provides both a path to sustainable economic growth and potential exports.

## **6. Questions & Answers**

### **Why a solar water heater as first prize?**

Solar water heating uses a free resource (sunlight on a roof) that is otherwise wasted, and leaves more electricity available for extending access or for other household uses. Domestic water heating generally accounts for between 40 and 50% of energy used in suburban South African homes, which are connected to grid electricity. Solar water heating saves money by cutting energy bills.

Domestic solar water heaters (SWH) usually pay for themselves in 3 - 5 years and, when appropriately sized and correctly designed and installed, provide approximately 70% of the energy required for domestic water heating. It is the kind of technological innovation that middle to upper-income home can afford to buy – that is, our target market. Solar water heating - particularly if used with no, or with limited and time-controlled electric back-up – reduces demand during peak consumption period, thus reducing the demand that is the main driver for development of new coal or nuclear power stations.

Homemade systems can be made from scrap material [e.g. in Santiago, Chile, cold-drink bottles painted black are placed in glass-fronted boxes lined with reflective foil to heat dish-washing water]

### **Benefits of a Solar Water Heater (SWH)**

The following are some of the benefits of an expanded SWH industry

- SWH technology is well established in SA, and quality products are already manufactured and marketed both locally and abroad.
- Not only are SWHs benign, but they offer a significant opportunity for securing carbon credits (under the Kyoto Protocol's Clean Development Mechanism).
- SWHs use all locally produced materials.
- SWHs constitute a significant low cost job creating opportunity.
- SWHs provide a less expensive method of heating hot water, based on life cycle costing techniques, than electricity.
- Hot water heated by solar contributes significantly to domestic hygiene.
- An expanded SWH industry could reduce electricity demand to such an extent in SA as to delay the need for constructing another power station at this time – coal fired power stations are responsible for

extreme air pollution (particulates of SOX and NOX – responsible for many respiratory diseases)  
making SA the 15<sup>th</sup> highest emitter of greenhouse gasses in the world.

The major disadvantage of SWHs is that the initial capital cost is generally higher than most other methods of heating domestic hot water, but after three years it pays for itself and one's energy bill goes down significantly.