

## SUSTAINABLE ENERGY NEWS on EMAIL (SENSE) number 7

Welcome to the seventh 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

#### **SECCP co-ordinates WSSD national Energy Caucus**

The Civil Society Secretariat of the WSSD asked SECCP to facilitate a national workshop on energy issues for preparation for WSSD the outcome of which was a loose network out of which a committee will emerge. At present it is identified as the beginnings of an energy caucus with the intention of making it more inclusive.

The SECCP Energy Position paper was circulated as a discussion document, in particular, the 20/20 vision for energy: 20% of SA's energy to be supplied from renewable energy sources by 2020. Key components of the position paper were included in the 'Bali Declaration' that Secretariat and NGOs have taken to PrepCom IV.

The workshop not only served as preparation for WSSD but also served as preparation for input into the National Strategy for Sustainable Development (NSSD) – a process government has promised to resume after WSSD. The workshop will be followed by provincial workshops.

Around 30 individuals participated in the workshop in Cape Town and debate was hearty and fruitful with individuals breaking into groups to discuss cross-cutting issues as well as the prioritisation of issues under the broad categories of: renewable energy, energy efficiency, climate change, and sustainable economics.

A revised paper is currently being drafted, incorporating inputs/amendments and additions from the different working groups and it will be finalised by June 20. Thereafter it will be discussed at provincial workshops that are to be co-ordinated along regional lines – one Johannesburg co-ordinator (covering Gauteng, Limpopo, KZN and Mpumalanga) and one Western Cape co-ordinator (W. Cape, E. Cape, N. Cape, Free State). These are to operate as a hub that people can join and leave, with it being the hub's responsibility to circulate inputs. For more information or a copy of the final paper contact [Erika@earthlife.org.za](mailto:Erika@earthlife.org.za).

## **SECCP invited to present to the Parliamentary Portfolio Committee on Energy**

What was to have been a great opportunity for influencing the government's watchdog turned into a travesty. The Parliamentary Portfolio Committee set aside June 24 and 25 to meet with civil society organisations from around South Africa to hear their views and experiences of the challenges facing the delivery of a healthy environment for South Africans, and to share ideas and plans for the World Summit on Sustainable Development. On the appointed day CBOs and NGOs arrived only to find that the Chairperson was ill, the venue too small and that the meeting had been cancelled due to a "technical hitch", which was not explained. We were however graced with having three members from the ANC study group who asked us to cut our presentations to 5 minutes. A common NGO concern was the lack of a venue for WSSD and the prohibitively high registration fee (\$180), leaving opportunities for NGO input to a minimum. SECCP presented its 20/20 vision for energy.

## **SECCP organises radio competition for WSSD**

As an awareness raising initiative for WSSD, SECCP has decided to run a radio competition in which listeners can win a range of renewable energy technologies, and with the first prize being a solar water heater. Renewable energy service providers have been approached to donate prizes and the response has been positive. The competition will run during the first week of August and will be aired on SAFM 104-107. In this way SECCP aims to raise the profile of sustainable energy in general with an emphasis on energy efficiency measures that can be adopted by the general public. More information will follow in the next issues of SENSE.

## **Energy Efficiency brochures**

SECCP has printed a new brochure: "Energy Efficiency is a Winner" outlining why energy efficiency is a good idea, small measures on what individuals can do to ensure energy efficiency including energy efficient behaviour, technology and appliances as well as development and infrastructure options. Should you be in a position to disseminate any of these brochures, please contact Lerato on [seccp@earthlife.org.za](mailto:seccp@earthlife.org.za).

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

### **The DME White Paper on Renewable Energy has finally been released**

Overall the white paper is too general with only little commitments. On the positive side, a medium term goal for RE has been introduced. However, keeping in mind that this was first a strategy and then developed into a white paper, it is thin and with only a few concrete initiatives and SECCP anticipates a delay before actual implementation. (On the other hand, it gives SECCP an excellent opportunity to progress on its "Policies and Measures for Renewable Energy and Energy Efficiency in SA" study and feed it into the process.)

Long-term goals should be introduced as well. It is very important that long term considerations are integrated in present decisions today in order to avoid the introduction of solutions that fulfil short/medium term goals but may pose barriers to long-term solutions in the future.

In the analyses of different measures to promote RE, consideration should also be given to introducing emission caps to the power generators. This could be in the form of emission caps per kWh produced and decreasing over time. In order to be able to continue operation of existing coal-fired plants, companies would have to introduce RE in their capacity mix.

The White paper talks a lot about giving incentives to stakeholders, but very little information is given as to who these stakeholders are. A stakeholder analysis should be carried out to identify: who are the most likely stakeholders to implement RE in short/medium/long term; what kind of different barriers these stakeholder groups face; what kind of PAMs they would be most receptive to; and if there are specific technologies more appropriate to some stakeholder groups.

Also, it should be pointed out that energy efficiency policies would reduce energy consumption and make it easier to reach ambitious RE goals.

The amount of RE consumed within the next 10 years will also be a function of:

- Any decisions regarding new capacity in the power generation sector including decisions on nuclear capacity.
- Availability of financing mechanisms

Concerning “South Africa in the International Arena”, it should be emphasised that with the implementation of the Kyoto Protocol, it is likely that purchasers of South African goods will begin to ask questions about the CO2 emissions.

Concerning the “barriers to Renewable Energy Implementation” there should be mention made of the lack of full cost recovery. The costs not covered by the energy prices are presently covered by the South African society.

Concerning the “Enabling Environment”, it should be pointed out that RE is not commercially competitive in the present regulatory framework. This is highly dependent on market access, fair competition and cost recovery. Experiences could be drawn from Europe and maybe also India. It would be interesting to know how much value should be given to the absence of 1 tonne CO2 to change this. Socio-economic analyses would provide more information.

The White paper states that, even with externalities included, it would still be necessary to support RE technologies. We would like to see more information on whether this is documented and if it stands for all technologies?

It is alarming to see the weight given to Hydropower since the climate change impacts from hydro are quite substantial. The International Rivers Network has recently released a report at a UN climate conference summarising the latest research on greenhouse gas emissions from dams and reservoirs. Greenhouse gases have been measured at all 30 reservoirs where research has been carried out. In tropical areas, hydropower reservoirs may be much worse climate polluters than even coal power plants.

The IRN report quotes an initial estimate from Canadian researchers that the amount of methane released from reservoirs worldwide is equal to 20% of the total methane from all other known sources due to human activities. Other major methane sources include livestock, fossil fuels and landfills. Carbon dioxide from reservoirs is estimated at 4% of other anthropogenic sources - mainly fossil fuels, deforestation and agriculture. IRN’s report also summarises how climate change may impact the viability and safety of dams by increasing both droughts and floods. Climate change is likely to shorten the useful lifetime of dams by accelerating reservoir sedimentation. The report concludes that because of their negative social, environmental and climate impacts, large hydropower projects should not receive carbon credits under climate trading schemes such as the Kyoto Protocol’s Clean Development Mechanism (CDM). Any small hydro project receiving CDM credits should comply with the recommendations of the World Commission on Dams.

The government should actively involve NGOs and CBOs in “Awareness Raising, Capacity Building and Education”. That would conform with South Africa’s obligations under Article 6 of the UNFCCC (on education, training and awareness). A stakeholder analysis should be carried out in order to facilitate the objectives of awareness raising, capacity building and education. Programmes should be based on this analysis in order to optimise government spending.

(SECCP will be releasing a full response to the White paper in the next edition of SENSE.)

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

#### **Bio-diesel for buses in Zone 1 at the Summit**

The South African Rural Renewable Bio-Energy Program intends to train previously disadvantaged communities to build rural infrastructure and promote the growth of agri-businesses & biogas systems to produce down-stream biofuels and its many by-products.

This program is an initiative spearheaded by the African Eco Foundation, a non-profit NGO. It was created to develop a sustainable model for the introduction & production of renewable sources of bio-energy in SA. The Foundation is committed to initiating, training, then implementing, evaluating and monitoring projects that are socially, economically and environmentally sustainable and improving peoples lives by bridging the gap between their needs and their resources & providing renewable energy to these communities thus reducing air pollution.

Africa Eco Foundation’s “Biodiesel for Community Development Program” has been invited to partake in the WSSD. Its Bio-diesel program will be showcased with an exhibition space at Ubuntu Village as part of the Greening Initiative, and the utilisation of biodiesel in all Zone 1 buses. The Greening the WSSD programme is considering incorporating Africa Eco Foundation’s crushing and refining plant on Demonstration Tours. For more information contact [Khiba@netactive.co.za](mailto:Khiba@netactive.co.za).

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

On August 13, 2002, SECCP will be hosting an international event on Policies and Measures for Sustainable Energy at DBSA, Midrand. The main presentation will be of the initial report of the SECCP / EDRC Research Study of "Policies and Measures for Renewable Energy and Energy Efficiency in South Africa".

This event will include presentations by the research team, including preliminary results of modelling of progressive scenarios using the LEAP and MARKAL models; inputs by members of the international Research Reference Group; as well as questions and group discussions. The programme will be closed with an early evening cocktail party.

The targeted participants are:

- Decision-makers regarding energy planning, generation and use - government and business
- Government officials involved in energy, environment and economic policy;
- Civil society organisations and representatives dealing with energy and climate related issues;
- Academic community interested in energy and climate change policy;
- Press and trade media

All are welcome to apply to attend this event, which will also present the **20 – 20 Energy Vision**, consistent with the South African Civil Society 'Bali Declaration' presented at PrepCom4 of the WSSD.

Given the huge human health and environmental costs of South Africa's dependence on coal-fired electricity generation, contrasted with our region's abundance of renewable energy resources, our hosting of the World Summit on Sustainable Development presents a challenging opportunity – to commit to a new departure in energy development. The risks of such a bold but necessary change of direction can be managed by ensuring international commitments to targets and timeframes for a global transition to sustainable energy. The Pre-WSSD Symposium will consider both national and global means for realising the 20 – 20 Energy Vision.

Invitations and more information: [seccp@earthlife.org.za](mailto:seccp@earthlife.org.za)

### **Implementation Conference prior to WSSD**

Stakeholder Forum, a project initiated by UNED, is organising an 'Implementation Conference' in Jo'burg prior to the WSSD. One of the four issues it is dealing with is sustainable energy. The aim of this multi-stakeholder conference is to produce concrete action plans at the end of the conference that will lead to real action. Some of these may be fed into the official summit process as 'type 2' outcomes.

At the moment the Forum has a number of draft action plans relating mostly to small-scale community level renewable energy projects (such as micro-hydro & biomass) and also to the sharing of best practise from different areas of the developing world. Involved in these action plans are a broad range of stakeholders including governments, intergovernmental organisations, NGOs, community representatives, funding organisations, grassroots networks and academia.

For more information contact Marcus Hill, Stakeholder Forum (Formerly UNED) [mhill@earthsummit2002.org](mailto:mhill@earthsummit2002.org), or visit [www.earthsummit2002.org/ic](http://www.earthsummit2002.org/ic) and [www.stakeholderforum.org](http://www.stakeholderforum.org)

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

### **Humanity's resource demand exceeds the earth's capacity**

Humanity's use of natural resources, or Ecological Footprint, has exceeded the regenerative capacity of the Earth since the 1980s. The finding is outlined in a paper published on-line for the journal *Proceedings of the National Academy of Sciences (PNAS)*. Redefining Progress Sustainability Program Director Mathis Wackernagel is the lead author of the paper, "*Tracking the ecological overshoot of the human economy.*" He and his colleagues reached their conclusion by comparing humanity's demand on the environment to the earth's supply of bio-productive areas over the past 40 years.

"Sustainability requires living with the regenerative capacity of the biosphere," write Wackernagel and his colleagues. "In an attempt to measure the extent to which humanity satisfies this requirement, we use existing

data to translate human demand on the environment into the area required for the production of food and other goods, together with the absorption of wastes."

The researchers assessed the total area globally available for growing crops, grazing animals, harvesting timber, accommodating infrastructure, marine fishing, and absorbing carbon dioxide produced by burning fossil fuels. They then calculated how much area would be required to sustainably meet human demand for these various activities.

According to this analysis, human demand (or Ecological Footprint) in 1961 was about 70 percent of the Earth's regenerative capacity. By the 1980s demand had risen to match total global supply, and by 1999 demand exceeded supply by at least twenty percent. It takes the biosphere, therefore, at least a year and three months to renew what humanity uses in a single year.

Redefining Progress is a nonpartisan public policy organization that creates policies and tools to encourage accurate market prices, preserve our common assets, and foster social and economic sustainability. –

[www.RedefiningProgress.org](http://www.RedefiningProgress.org)

### **U.S. Nuclear Regulator assesses vulnerability of nuclear plants to air strikes**

The Nuclear Regulatory Commission, under pressure from lawmakers to do more to safeguard the nation's 103 nuclear power plants, said on Wednesday it was analysing what devastation might occur if a fuel-laden commercial airliner crashed into a reactor. – <http://www.energycentral.com>.

### **Research break through into fusion energy could make oil obsolete**

On May 28, a research scientist at a scientific conference in Alberta, Canada announced spectacular results that promise cheap, clean, non-radioactive energy, opening the door to a new energy source that may be a 100 times cheaper than oil and gas. The new results are highly important since they show that the extremely high temperatures, over a billion degrees, needed to burn hydrogen-boron fuel can be reached. A plasma focus reactor using hydrogen-boron fuel would be an almost ideal source of energy. No radioactive by products are produced and the fusion energy is released in the form of a beam of charged particles, which can be converted directly to electricity, without the use of expensive steam turbines. A plasma focus device costs less than \$500,000 to build. Once fully developed, focus-based fusion reactors would also be small, making possible decentralized sources of power. Since the reactors would be so economical, the successful development of plasma focus hydrogen-boron reactors would eventually make oil and gas nearly worthless. Other scientists congratulated him on the success. Yet instead of hailing this new work, a laboratory manager threatened two other members of the same research team with firing if they did not repudiate the results that make existing similar technologies look useless and poses a threat to the energy multinationals. Funding for the research has been cut off, and the mainstream press has ignored both the new discovery and the effort to suppress it. – <http://www.focusfusion.org>

### **European greens push for increase in RE targets**

WWF (and GP I assume) are definitely out there campaigning for the 10% NEW renewables globally by 2010. That is tough enough given that we are presently at just 2% globally and that the increase for the NEW renewables (excluding large hydro, waste and peat) from 1 to 2% took almost 10 years globally. So, now we are asking for an immediate increase of 1% per annum for the NEW renewables. And please keep in mind that there are basically only six key countries/regions that we need to convince for the 10% as these consume over two third of world's primary energy, USA, China, India, EU, Japan and Russia - Each of them is a tough nut and has not been seen to be supportive on New renewables but rather destructive....

I try not to step on other NGOs feet but please just have a look at the proposed targets of the "energy caucus" and tell us whether they have any chance to be even discussed by your or other governments?

The targets of the "energy caucus" are all nice and wonderful (full phase out of nuclear globally by 2005, 25% new renewables by 2012 etc.) but unfortunately too much wishful thinking in order to be taken serious by governments to create some momentum - *European Climate and Energy Policy Unit*

### **Scotland perfectly placed for renewable technologies**

Ross Finnie, Scottish Executive Minister for Environment and Rural Development said that Scotland is in a prime position to develop and exploit the opportunities presented by emerging renewable energy technology. He highlighted the potential of the emerging sector, not just in terms of generating clean energy, but in establishing a new Scottish industry able to compete in an international market. "From onshore and offshore wind power to wave and tidal stream power, renewable energy presents tremendous opportunities for Scotland," he said. "We cannot and will not let these pass by. We already produce some 13% of our energy

needs from clean, renewable sources, and there is massive potential to expand this, to benefit everyone with a cleaner environment.

## 5. SA Energy Bills & conferences

### **Electricity Distribution Industry Regulatory Draft Bill**

The Department had hoped to present the EDI Regulatory draft Bill to Cabinet by May but this did not materialise. The Department is finalising the administrative processes that the Bill is to go through before would be submitted to Cabinet. Once Cabinet had considered the Bill it would be published for public comment. The Department is also in the process of registering the EDI Holding Company to oversee the restructuring process. Discussions between the Department and National Treasury had delayed the registration of the holding company. The Company is expected to be dissolved after five to seven years and it is expected that regional distributors would be freestanding entities by then. The Department had advertised posts for a CEO for EDI Holdings, as well as board members and executive directors. Possible candidates have already been identified and the Department is waiting for a go ahead from National Treasury before making the final appointments. The company should be up and running shortly.

### **Minerals and Petroleum Resources Development Bill**

The Bill was tabled in Parliament on the 18 April 2002. The Department of Minerals and Energy briefed the Minerals and Energy Portfolio Committee on the Bill on the 30 April 2002. The deadline for written submissions to the Committee was the 27 May 2002. Public hearings took place on the 4 - 12 June 2002. Deliberations commenced on the 13 June and the process is expected to be complete by 30 June 2002. The monetary aspects of the Bill had been removed to form a separate money Bill. The money Bill is still being scrutinised by National Treasury.

*Thanks to Contact Trust for keeping us abreast of Parliamentary developments*