

SUSTAINABLE ENERGY NEWS on EMAIL (SENSE) number 14

Welcome to the Fourteenth edition of SENSE – Sustainable Energy News by E-mail – 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 Elin Oettle and Mette Nedergaard is assistant editor based in Denmark.

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1. SECCP News

The SECCP offices have now re-opened, as staff returned last week from their three weeks Study Tour to Denmark and Germany. This has been a busy time, not only for staff participating in the Tour, but also back in South Africa where there has been a sudden spate in activities relating to energy and climate change issues. On the one hand, the Air Quality Management Act was circulated for comment in the last month, stimulating a co-ordinated civil society input; the establishment of the National Environmental Advisory Forum has begun with calls for nominations; and the Minister of Minerals and Energy gave her budget speech, indicating developments in a range of other energy policies.

On the other hand, there has been much activity around the nuclear industry: Earthlife Africa Cape Town Branch instituted a court action against the Department of Environmental Affairs and Tourism to prevent the passing of a record of decision on the PBMR; the National Radioactive Waste Management Policy is complete and is to be examined by cabinet, fresh scandals in the nuclear industry abroad and rumours of the withdrawal of PBMR support are hindering the progress of the local nuclear industry.

The SECCP faces a busy month ahead not only with engaging in national processes of this sort, but also in the launch of the research report commissioned from the MEPC on employment potential from Renewable Energy and in development of the next project phase. We also hope to have our Office Manager, Lerato Potele, back from maternity leave in July.

Study Tour to Denmark and Germany

The SECCP supported a two-week Study Tour in May to examine applications of renewable energy and energy efficiency measures in Denmark. SECCP project partners WWF Denmark were responsible for coordinating the tour programme in Denmark and did an excellent job, organising meetings with a range of parties from parliamentarians to local NGOs implementing sustainable energy practices and businesses involved in the industry. The tour consisted of ten participants, including several representatives of the Department of Minerals and Energy and six members of Earthlife Africa. The participants were Mrs Bulelwa

Tinto, Member of Parliament serving on the Minerals and Energy Portfolio Committee; Ms Noluthando Poswa and Ms Faith Ndzimande, from the Department of Minerals and Energy; Mr Thandile Gubevu, Economic Advisor to the Minister in the Department of Minerals and Energy; Mr Frank Bryan Ashe, Earthlife Africa eThekweni; Mr Sibusiso Mimi Earthlife Africa Cape Town; Mr Martin Grosskoff, Earthlife Africa Johannesburg and on the SECCP PGC; and from the project itself Richard Worthington, Mamshoabathe Noko and Elin Oettlé.

The tour gave a clear sense of the consequences of various policy decisions around sustainable energy as they have been implemented in Denmark over the last few decades. Particularly noticeable was the effects of the recent change in government, which has led to significant changes in energy policy. The tour allowed participants to see the implementation of what is still mostly theoretical in South Africa, and to gain more insight into the practical issues at stake. The visit to Samsø Renewable Energy Island was a highlight, where the local community is aiming for 100% renewable energy production to cover all their local energy needs.

After these two weeks, half of the party departed, while the Earthlife contingent continued to Germany, where the Heinrich Boll Foundation supported a 4-day extension of the study tour. This included a packed programme with visits in both Berlin and Dusseldorf, providing a very interesting parallel to the learnings from Denmark. Once again participants were fortunate to meet with parliamentarians, local government officials, scientists and those involved in practical projects.

A report of the Study Tour, including both the Danish and German legs, is being compiled by all those who participated. The report will include the key findings from all the activities and the recommendations of the participants for how this can inform the South African sustainable energy progress. The report will be available later in June to any interested parties.

Research on employment potential from Renewable Energy

The SECCP is soon to launch the research study: 'Employment Potential of Renewable Energy Development', conducted by the Minerals and Energy Policy Centre (MEPC). The study will give a detailed breakdown of jobs associated with various technologies, including consideration of different levels of local production and the training needed for workers to transfer from conventional energy jobs to the renewables sector. MEPC will be consulting stakeholders as part of the research process, and will conduct a stakeholder workshop in the week of the 17th June 2003. If you would like to be consulted please contact Khamarunga Banda: (011) 709 4018; Khamarunga@mepc.org.za (or speak to Noel Sellick). Please look out for the launch in late June or early July, which will be advertised closer to the time.

Comments on the Air Quality Management Draft Bill

The SECCP has been involved in commenting on the Draft Air Quality Management Bill, as part of the civil society input being coordinated by groundWork. The following are some of the suggestions made by Earthlife Africa Jhb for amendments to the Bill:

- The Bill should provide for incentives and disincentives, including economic instruments, to encourage changes in behaviour regarding air pollution. Economic instruments are essential not only to provide for possible incentives (e.g. rebates on charges levied for polluting), but also to start to internalise the costs of pollution currently borne by society at large.
- Voluntary agreements should specifically be aimed at encouraging participants to *exceed* the minimum standards, not merely to meet them.
- Effective AQM requires direct measures that can be applied to point source emissions – tackling the cause rather than the effects (starting with those imposing the heaviest burdens); economic disincentives can be applied at the onset of implementation, but phased to prevent unacceptably sudden economic shocks. Data on point source emissions will be required for licensing procedures and verification and economic instruments could help to finance implementation and enforcement while also sending corrective pricing signals.
- To contemplate trade in licenses to pollute, without any mechanism for applying the polluter pays principle directly, is inconsistent with NEMA principles and constitutional rights. Enabling the minister with a wider range of measures will facilitate equitable distribution of financial burdens and could assist economic transformation rather than favouring entrenched interests, as will likely be the trend with reliance on licensing.

- Civil society is also motivating for the minimum period for submissions to be 30, rather than 21 days.
- The Polluter Pays principle must be applied through NEMA instruments such as this bill.

(See more on the status of the Bill in 'Air Quality Management Draft Bill' below)

Affordable access to sustainable energy is possible

This letter was sent to The Star newspaper on the 29th May by Richard Worthington, SECCP Coordinator. It was written in response to a previous letter published in the Star on the 28th May 2003 by Mr Sandile Tyatya, from the Department of Minerals and Energy)

Sandile Tyatya, in his letter of May 28 (Poor's needs vital in energy debate) makes many pertinent points, but fails to engage the current debate to which he refers. Like the man himself, the letter is reasonable and placatory, but shies away from strategic direction or choices. After much general discussion he concludes that future options should not be closed for development of any energy source including nuclear.

The key question we face in SA is how best to use limited financial resources to meet energy needs, with the needs of the poor an urgent priority. Recent public debate has focused on the proposed Pebble Bed Modular Reactor (PBMR), a nuclear project that Tyatya obliquely endorses, in the name of the poor. Yet this speculative project is based on a dream of earning foreign exchange through selling reactors and fuel to other countries - even the project promoters (PBMR Ltd) concede that it is not a competitive option for local electricity supply.

The position implicit in Tyatya's vague observations, consistent with the behaviour of the Department of Minerals and Energy (DME), for which he works, is a defence of business-as-usual. South Africa needs to make some strategic decisions soon regarding future energy development: we have the opportunity to initiate a just transition to sustainable energy, but it will require decisive and courageous leadership. Vested business interests want to defer any measures that will impact their profits and will resist the changes needed to deliver social benefits, such as increased employment and a healthy environment leading to reduced public health care costs.

Certainly South Africa will need to draw on many energy sources for many years, but applying "...life-cycle or cradle-to-grave analysis..." as Tyatya suggests, does not only point to "Broadening the energy mix..." but reveals the clear imperative for developing renewable energy sources. Such analysis reveals the reasons for the fact that renewable energy technologies (RETs) are booming (25 – 40% growth) while nuclear experiences negative real growth. The apparent higher development costs of RETs are a result of incomplete accounting and market conditions that are inconsistent with sustainable development.

Tyatya does not identify the "...very serious challenges preventing the projected and expected penetration of these [renewable] energy sources in the market..." Some are not hard to find, e.g. past subsidisation of fossil fuel and nuclear industries has been astronomical; now our Energy White Paper (1998) calls for equal resources for the development of energy technologies, yet the nuclear industry currently receives ten times more resources than all renewable technologies (e.g. wind, solar thermal, micro-hydro, wave and photovoltaic) put together.

Perhaps the greatest challenge, a reality few dare articulate, is that we must accept a higher price on energy. Using the lure of 'cheap' electricity for energy-intensive industries has not delivered the anticipated foreign direct investment, while it does mean that most of the true costs of generation are externalised to society at large – with the poor majority bearing most of the burden. We effectively subsidise local pollution by multinational corporates while much of our population cannot afford basic energy services.

Accepting a higher over-all price on energy must of course be accompanied by measures to correct the current situation where the greatest accounted costs in providing electricity are for distribution – since true costs of resource use and generation impacts are externalised. Access to modern energy services is widely regarded as a right (cf WSSD), yet charges for the use of publicly financed infrastructure, i.e. distribution, result in the poor being unable to afford electricity. This is also why the poor tend to spend ten times more of their income on energy than the affluent [and much more again than industry].

Life-cycle analysis and a literal reading of the DME commitment to more 'cost-reflective pricing', with full-cost accounting (or implementing business lip-service to the triple-bottom-line in the name of sustainable development) will mean that we no longer waste the free renewable resources with which South Africa is so generously endowed. Combine this with a free basic allowance (at least 1 kWh per person per day) off-set by a stepped block tariff (paying more for electricity for luxury use), and we could provide affordable energy services for all South Africans without polluting people, degrading our natural resources and dangerously disrupting the global climate.

With well over R1billion spent, before the designs have been finalised, government support for the PBMR is an obstacle to increasing access to energy for the poor. It is also a barrier to development of local industries in renewable energy technologies that directly create many more jobs than conventional energy sources and have much more secure export potential.

Richard Worthington, Sustainable Energy and Climate Change Partnership

2. SA's sustainable energy progress

Renewable Energy White Paper progress

The latest feedback from within DME indicates that the Draft White Paper on Renewable Energy and Clean Energy Development will stay with government for a month or two yet. We are hoping that a revised draft will be published for public comment when internal government consultations are complete.

Energy Caucus Meeting

Planning is under way for the inaugural meeting of a South African civil society Energy Caucus likely to be held in the second half of July. The meeting will be announced in this newsletter – people interested in being invited can contact ourselves or e-mail Leila Mohammed at Sustainable Energy Africa (SEA) at leila@sustainable.org.za

The final dates will be set after consultation and when we have more information about the DME's "Energy Efficiency Week" also planned for late July.

3. Unsustainable Energy

ELA Cape Town goes to court over PBMR decision

Earthlife Africa's Cape Town branch took the anti-nuclear campaign one step further last Monday when they took the Department of Environmental Affairs and Tourism (DEAT) to court in order to prevent a record of decision being passed on the proposed new nuclear development. At Pretoria High Court on Monday the 26th May, the decision was postponed until June 3rd (10am) to give the DEAT time to respond.

This is part of a lengthy process where Earthlife Africa has tried to participate in the EIA process for the proposed new Pebble Bed Modular Reactor (PBMR). However, Earthlife has battled to access important reports which would allow them to properly review the project – for example, crucial safety information was withheld under the auspices of commercial confidentiality until after the deadline for inputs was passed. Earthlife Africa claims that the report is biased, and they have not been allowed to have their concerns heard.

The PBMR project has already cost the South Africa over a billion Rand, yet not real progress has been made. The project is based on technology that was rejected in Europe as too risky, yet South Africa has continued to invest far more in its development than in tried and tested renewable energy technologies. Earthlife Africa is not alone in the anti-nuclear campaign, but is part of a wider network of concerned communities, NGOs and activists in South Africa and internationally.

For more information, please contact Liz McDaid - 021 683 5182 or 082 731 5643

Nuclear energy suffers bad press all round

The pro-nuclear lobby has suffered several blows this month with more reports of nuclear health threats and decreasing markets for nuclear technology. This comes at a time when proponents of the Pebble Bed Modular Reactor nuclear technologies are fighting for a positive record of decision on the recent EIA here in South Africa.

In Russia it was recently reported that the concrete shield blocking further radiation from escaping the exploded nuclear power station in Chernobyl is crumbling and will urgently require reinforcement. Thousands of deaths from radiation and cases of thyroid cancer have been blamed on the 1986 accident. There have also been reports of continuing high death rates in the Russian town of Muslyumovo for the last 50 years from nuclear accidents and nuclear waste dumping.

Meanwhile, research released in April on childhood cancer in Florida showed a 37 percent increase in Leukemia around nuclear reactors, with children living close to the reactors showing much higher levels of radioactive Strontium-90. This study clearly links nuclear power and the occurrence of cancer, and notes that infants and children are especially vulnerable to cancer from radiation. The US was intended to be one of the biggest markets for the PBMR.

In the UK the government has also dropped privatisation plans for British Nuclear Fuels Ltd and is to announce a draft bill to authorize a £48bn clean-up plan for their nuclear legacy. British Nuclear Fuels owns about 10 percent of the PBMR project and looks unlikely to commission any new facilities in the UK.

In South Africa, senior officials in the KZN department of agriculture and environmental affairs have also raised concerns about importing nuclear fuels through Durban harbour. Proposals were to transport nuclear materials through Durban to Pelindaba, where a fuel manufacturing plant is planned, and on to the Koeberg nuclear power station in the Western Cape. Officials claim that there was not enough consultation with the province involved, which is legally required in such cases. This also comes in the context that eThekweni municipality declared Durban a nuclear free city last year. Part of the problem is South Africa's high accident rate with vehicles carrying hazardous materials, which could be far more disastrous in the case of radioactive materials.

Future prospects do not look promising for the PBMR project, which will be reliant on international markets to be remotely economically viable. The PBMR constitutes an untested technology with unknown safety concerns, and much development is still required before it is workable. With the billions of Rands required for this development, the question remains: Why is South Africa still set on continuing?

4. General Sustainable Energy News

Geothermal Energy for Africa

The use of geothermal energy to produce electricity in Africa looks set to increase dramatically over the next 20 years. Currently only Kenya makes use of some of its geothermal potential, producing 57 megawatts (MW) of electricity a year, whereas at least 700MW potential remains untapped in Africa. After a recent UNEP-organised conference on geothermal energy held in Nairobi, ten African countries have committed to reaching 1000 megawatts production by 2020. Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Malawi, Rwanda, Tanzania, Uganda and Zambia all joined in the goal of exploring and developing this renewable energy source.

Geothermal energy originates from the earth's core, and is conducted to the surface through heated rock and water. As an energy source for electricity generation, geothermal power is reliable and clean, and is independent of local weather conditions. The main reason for the lack of such development to date is the high initial costs of exploration and initial drilling. African countries lack such finances at home, and the lack of faith from the international finance community has left them without prospects to date.

At the recent conference, however, three American organizations: the US Department of State, the US Trade & Development Agency and the Overseas Private Investment Corporation of the US, made commitments to support this development, although the total amount committed is not clear. It was also decided to launch a risk guarantee fund for drilling projects for exploration and appraisal.

World's first hydrogen filling station opened

On April 24th the world's first hydrogen fuel station was opened in Reykjavik, Iceland. This was due to be followed in May by another filling station in Hamburg, Germany as part of an EU-backed programme developing and promoting hydrogen-fuelled vehicles. Hydrogen is a carbon-free fuel source that can be produced using only water and electricity, and the aim is to ultimately make hydrogen a commercially viable alternative to fossil fuels.

The station in Hamburg is to form part of CUTE (Clean Urban Transport Europe), a demonstration project on the use of hydrogen as fuel in 27 buses in nine European cities. The Icelandic station is part of the ECTOS program, a "sister" program to CUTE. In August three hydrogen-powered buses from Daimler-Chrysler are to be introduced in Reykjavik, which will be tested over a two-year period. Each bus will have a 200km range before needing refuelling. In Hamburg, six hydrogen-powered delivery vans will be part of a three-year demonstration project.

5. SA Energy Bills

Air Quality Management Draft Bill

The draft Air Quality management Bill, which will replace the Atmospheric Pollution Prevention Act of 1965 (APPA) has been published, and the deadline for comments was set for the 31st May 2003.

On the 23rd and 24th May a civil society workshop entitled 'Response to the Air Quality Management Draft Bill: Civil Society' was held in Cape Town to discuss the new bill. More than 30 Civil Society groupings were due to attend to develop a joint civil society position to present to the government. The workshop was organized jointly by Contact Trust and groundWork.
(See SECCP comments above in 'SECCP News')

NEAF to be convened

The National Environmental Advisory Forum (NEAF), provided for in the National Environmental Management Act, is finally in the process of being established. The Department of Environmental Affairs and Tourism (DEAT) stated that the forum had not previously been appointed due to administrative support infrastructure that had to be put in place.

The Department issued a call for nominations on the 09 May, including organized labour, organized business, NGOs, CBOs and individuals. The aim of the forum will be to inform the Minister of the views of stakeholders on the principles of the National Environmental Management Act and advise the Minister on matters pertaining to the implementation of that act.

Many NGOs have agreed to collaborate on the submission of nominations and a process for short-listing is being considered. The closing date for submissions is the 30th June 2003.

Free Basic Electricity

The Minister of Department of Minerals and Energy, Phumzile Mlambo-Ngcuka, said in her recent budget speech that her department is prepared to supply a minimum of 500 000 qualifying families with free electricity by July this year. Households that earn less than R800 per month will qualify for 50kWh free electricity, while those in rural areas with solar energy supply will receive up to R40 per household per month for operation and maintenance costs. VAT is also to be excluded from paraffin.

Minerals and Energy Human Resource Development Master Plan

Also in her budget speech, the Minister of the Department of Minerals and Energy said that the Minerals and Energy Human Resource Development (HRD) Master Plan is underway. The plan is aimed at supporting previously disadvantaged people to enter the minerals and energy sectors, and includes an Energy Sectoral Education and Training Authority (SETA), CHIETA and MQA.

Electricity Distribution Industry Regulatory Draft Bill

The restructuring of the Electricity Distribution Industry (EDI) has begun with the appointment of a new CEO of EDI Holdings, Ms Phindi Nzimande and a board.

This marks the next step of the restructuring process begun in 1997, moving the EDI process into "implementation mode" according to the Minister.

The restructuring process was initiated with a stakeholder workshop and the formation of the Stakeholder Advisory Committee including suppliers, customers and labour representatives. Next, the fragmented EDI must be transformed into six new Regional Electricity Distributors, which will be put into place over the next few years.

National Radioactive Waste Management Policy

The National Radioactive Waste Management Policy is complete, and due to go to Cabinet sometime in June before being released for public comment. However, before the policy can be finalized, a strategy document still needed to formulate more specific implementation plans. The Department of Minerals and Energy has started this process by assessing the current status of radioactive waste management.

Electrification Program

The Department of Minerals and Energy's electrification plan is progressing, with a 3% increase from the previous year. The Minister noted that 338 572 homes, 974 schools and 49 clinics were electrified in the last year, and 5321 solar home systems were installed. The program, which aims to uplift poor and under serviced communities, has the goal of achieving universal electrification by 2008.

In the next year's budget includes R530 million on electrification, particularly focused on poorer areas. The current target is 300 000 connections for this year.

Still facing the challenge of 34 % of South Africa without electricity access, connections have been exceeding annual expectations and connection costs have come down steadily as infrastructure costs are reduced. This programme does not, however, address some of the real issues of access to services, as electricity costs still remain beyond the reach of many poor households.