

Welcome! SENSE is a service of the Energy Policy Unit of the Sustainable Energy and Climate Change Project (SECCP) of Earthlife Africa Johannesburg (ELA Jhb).

SENSE is a regular publication, edited by Tristen Taylor. We welcome any feedback and submissions. Also, let us know if you wish to get more information from ELA Jhb, or know someone else who should be receiving SENSE. Please note that the material in SENSE (in particular the Editorial) does not necessarily reflect the positions or policies of Earthlife Africa Jhb and/or the SECCP.

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1. Editorial

Ouch! We've just been mugged. Trevor Manuel and SASOL have got us...again. In the 2006 Budget Speech, Minister Manuel stated that he was considering a windfall tax on SASOL, which was making record profits. Essentially, the windfall tax was a method that would recover the state's historic investment in and subsidy of SASOL. The Minister duly formed a task team to look into the matter, which it duly did and came back with the conclusion that SASOL should pay its dues.

Then, in this month, something dramatic happened. The Minister did a startling u-turn (proving that government ministers can change their minds and adopt new policy) and dropped the bombshell that there would be no windfall tax. The guys and galls at SASOL and PetroSA must have reached for

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the Dom Pérignon and started singing, "We are the champions - my friends And we'll keep on fighting - till the end." [1]

Predictably enough, the business press have been cheering on Minister Manuel and just generally getting down with the current corporate love affair. The rest of us have been scratching our heads and wondering why Treasury is passing up a fat check. Given the socio-economic needs of the majority and Apartheid's legacy of underdevelopment, some money from SASOL would have been useful. Maybe some of the 30% of us who don't have electricity--literally living in the Dark Age--could have been allowed to see the light.

Why the u-turn? The team at SENSE has figured it out. For the past several issues, we've been noting SASOL's plans for global domination. Hardly a month could go by without SASOL making another announcement of plans to open plant in America, China, Brazil, in fact everywhere but South Africa. We noticed, but didn't make the connection. Treasury also noticed and made the connection (Did someone from the private sector help Treasury make that connection? Any guesses who?). If the windfall tax went ahead, then SASOL would take its cash and technology, both of them born from strong state subsidy, and invest outside of South Africa, thus leaving the country with the prospect of continuing to import oil without increased domestic supply. Can anyone say "balance of payments problem"?

On the same day Treasury did its u-turn on the windfall tax, SASOL announced plans to construct a 80,000 barrels a day plant in the Waterberg, soon to be formally known as a beautiful environmental resource and magnet for eco-tourism.

Hurray. We don't get the money back from SASOL, we damage one of our few remaining eco-hotspots, and get to bear the externalised costs of SASOL's CO2 emissions; SASOL's Secunda plant is the world's top CO2 producer. We are not sure which one is a worse deal; the electricity firesale to Alcan, the SASOL Christmas present, or the R400 billion nuclear programme.

Speaking of Alcan, Rio Tinto mining has bought it for US\$38 billion, in cash. Will Rio Tinto respond favourably to Earthlife's PAIA request for the price to be paid for electricity by Alcan? Will NERSA? Don't hold your breath, but watch as the SECCP continues to poke, prod, and march against this secret deal.

Another thing not to hope for is anything visionary out of DME's Energy Security Master Plan for Liquid Fuels, as Richard Worthington notes in this edition. Speaking of visions, Lerato Maregele points out in a biofuels update that Tito has foreseen that maize as a crop for biofuels may push up food prices. Nice to know that they still have the crystal ball at the Reserve Bank. In related news, Science and Technology Minister Mangena has a sweet tooth and is punting sugar cane as the preferred crop for biofuel production.

In the SA Energy Policy & Analysis section, a strong case has been made for the installation of solar water heaters instead of construction of new generating plant. The SECCP is embarking on a project to investigate viable financing of large-scale solar water heating in urban centres.

The good news is that Algeria is going for solar electricity generation in a big way, and that another wind farm is being planned for South Africa.

The really bad news is that the lack of electricity across the continent is hampering African

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development, as noted by that bastion of progressive, left wing journalism, The Economist.

The next issue of SENSE will come to grips with Peak Oil and Militarisation in Africa. And that's a mugging of note....

Tristen Taylor
Energy Policy Officer
Earthlife Africa Jhb
25th of August 2007

[1] Lyrics from Queen, "We Are The Champions"

2. SECCP News

Energy's Master – Supply planning serves minerals interests
By Richard Worthington

Hilary Joffe wrote a piece in Business Day entitled: Bad time for government to get coy about its vision for energy. While we would agree with her that government is highly selective in its "enthusiasm for competition and partnerships with the private sector, as it is with implementing the 1998 White Paper on Energy policy, we see no evidence of any vision. More of everything we have been doing, including subsidising dirty energy options, with an expanded role for nuclear power the only deviation from business as usual, does not constitute a vision.

The DME's 'Energy Security Master Plan – Liquid Fuels' seems typical. We were promised an Integrated Energy Plan by early this year, but that process has been "held in abeyance" since last September and we now have another supply-driven strategy. Judging by the Minister of Public Enterprises, all decisions regarding electricity supply infrastructure investments will also have been made well before an Integrated Energy Plan has been developed.

The lip service paid to proper planning in this latest DME strategy is contradicted by the behaviour of this and other departments. The three sentences on improving energy efficiency are welcome, particularly the statement that reviews of efficiency and demand side management policy "should start towards end 2007 or early 2008", but this is no substitute for appropriate allocation of resources, such as financing solar water heating on a scale comparable to the avoided cost of new generation plan that it can deliver.

Treasury has waived the opportunity to recoup some of the massive public subsidies on which Sasol was built, while also addressing the excessive profits extracted from all consumers (including those struggling to cope with our pathetic public transport system) due to the perversities of faith-based markets. The revenue could have been used for strategic investments to meet policy commitments to utilising our abundant renewable energy resources, but Trevor considers the goodwill of this transnational to be of greater value.

Tax incentives for more coal to liquid fuel plant – the most greenhouse gas intensive energy option by far – have also been mooted, despite the Treasury's task team finding that additional tax was

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justified with oil prices over \$55 per barrel. Such a plant would require inter-basin water transfer, e.g. from another big dam in Lesotho, to meet its high water demand. Such supply may not last as the climate change impacts our fossil fuel addiction manifest.

The Supply Master Plan makes some commendable observations, including: “In ensuring energy security, a clear understanding of the interaction of energy with the economy and the environment is required, complemented by an understanding of the impact of changes in the environment on energy.” – indeed, this could be quoting the 1998 White Paper, as with: “a modelling and integrated planning capability will need to be built.”

However, one wonders what has provoked the line: “To prevent energy plans from being used for selfish purposes by individuals who are intent on selling their products at the expense of the economy and the people of South Africa, energy modelling should always be policy neutral.” (page 56) Given Treasury’s deference to Sasol, justified as part of a package to tempt Sasol to produce more product to sell to the people of South Africa, at prices that are set bearing no relation to production costs and yielding revenues unrelated to the publicly borne costs of massive pollution and inefficient resource use, these must be the good guys. So I guess it must be the fiendish emissaries of the wind turbine companies like Suzlon of India – as this company recently bought a majority share of a large German turbine manufacturer, perhaps they can now be considered as part of the neo-colonial conspiracy to deny Africans the right to screw things up just as royally others did before them.

We need to know not only how much the role of government in energy supply might cost us, as Joffe points out, but also the failure to implement full-cost accounting in the private sector or to carry through Treasury’s environmental fiscal reform process. We should also count the costs of choosing energy technologies and resources with low labour-intensity. Unfortunately the Externalities Study, mandated by 1998 policy, was deferred again last year and new tendering is yet to commence.

The subservience of energy to the minerals sector, part of the apartheid legacy, is arguably the greatest barrier to sustainable development in South Africa. We’re unlikely to see anything visionary from government on energy unless it is liberated from this role, in a dedicated department.

Urban Energy and Environment Interface (UEEI) Project Update By Sibusiso Mimi

The Urban Energy and Environment Interface (UEEI) is a component of the Sustainable Energy and Climate Change Project – a project of Earthlife Africa Johannesburg. UEEI is funded by the Danish International Development Fund and has two focal points:

The first focal point is the development of knowledge and the provision of information regarding how energy services needs can be met, including policy options for making modern energy services options affordable for all sectors of society.

The activities of the UEEI will include engaging with the Department of Minerals and Energy’s (DME) Integrated Energy Centres (IeCs) programme and explore what support or inputs can be provided to assist the programme in advancing towards achieving their objectives of inclusive and comprehensive information on energy services. Additional activities will include engaging the local

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government information centres and taking part in the development and implementation of energy and/or climate change strategies; and civil society mobilisation and strengthening.

The second focal point is the enabling of a large roll-out of solar water heaters (SWH) and other small off-grid renewable energy technologies, including to low-income households. Activities under this focal area will include the collection, collation and analysis of information on on-going solar water heater initiatives, the development of financing models, and the engagement of relevant stakeholders. The programme will focus on reviewing we can contribute to enabling large-sale roll-out in Gauteng and beyond.

Integrated Energy Centres (IECs) and information materials

On the 2nd August, the SECCP met with the DME officials responsible for the IeCs roll-out. The meeting was held in DME's Pretoria office and attended by five officials. The IeC unit has recently been relocated under the sub-directorate of hydro-carbons, due to the partnerships with Sasol and Total.

SECCP appreciates the unit's enthusiasm to share information, open-door policy to interaction with the members of the civil society and the commitment to provide SECCP with orientation visits to the functional IeCs such as in Mutale, Limpopo. We also look forward to attending the launch of a new IeC in Ratlou, North West Province, in September.

We will be formulating a plan for developing information materials on energy services options – written and/or for radio broadcast – and anybody with ideas or existing audio materials is encouraged to contact Sibusiso. We would also be very grateful for copies of any existing printed materials on energy service options – pamphlets rather than books – that anybody has (fax 086 686 8434, e-mail Sibusiso@earthlife.org.za or post to PO Box 32131, Braamfontein, 2017.

New Energy and Information Officer

Sibusiso Mimi, the newly appointed Energy and Information Officer. SECCP has recently employed Sibusiso Mimi in their Johannesburg office. Sibusiso Mimi has worked in the past with Earthlife Africa – Nuclear Energy Cost the Earth Campaign, as the media campaigner and then the campaign coordinator in Cape Town. He also worked on voluntary basis with the Environmental Justice Networking Forum (EJNF) as the energy resource and coordinating the Energy and Transport Task Team of EJNF, while also represented on the Western Cape provincial executive committee. Sibusiso later joined AGAMA Energy (Pty) Ltd as one of the projects managers and mainly coordinating the Southern Africa Regional Secretariat of the Renewable Energy and Energy efficiency Partnership (REEEP) and working with businesses, progressive governments and non-governmental organizations through-out the SADC and in the African region.

3. SA Sustainable Energy News

Study of West Coast Wind Farm Site Begins

John Yeld

Cape Argus

15th of August 2007

Eskom's plan to develop South Africa's first commercial wind farm on a 25km² site just inland from the beach and opposite Vredendal on the West Coast is gathering momentum. The site, about 25km north of the mouth of the Olifants River, is to have 100 wind turbines each producing up to two megawatts (MW) of power. An environmental impact assessment (EIA) of the project is under way.

According to a background information document, there is increasing pressure on countries around the world to increase their share of renewable energy, particularly because of global climate change and the non-sustainable exploitation of other energy sources such as oil, coal and gas.

The South African government has set a 10-year target of 10 000 gigawatt hours (GWh) of renewable energy by 2013, to be produced mainly from wind, solar, biomass (plant material) and small-scale hydro sources. This amounts to about 4% (or 1 667MW) of the total estimated demand for electricity (41 539MW) by 2013.

Eskom has embarked on a research programme to investigate local sources of renewable energy and identify appropriate alternative solutions, the document states. Wind is considered a "non-consumptive" use of natural resources, and the wind generation of electricity produces no greenhouse gases, although some are produced in the building and maintenance phases of the wind farm operation.

A wind energy facility also qualifies as a clean development mechanism (CDM) project under the Kyoto Protocol on global warming, meaning it also has a commercial value as a tradable commodity.

In February 2003, Eskom commissioned its small wind energy demonstration model at Klipheuwel near Durbanville, to look at the generation of wind energy in the South African environment and factors that affected performance of a wind farm.

Read more at: <http://allafrica.com/stories/printable/200708150424.html>

4. SA Unsustainable Energy

Treasury About-Turn On Windfall Tax for Sasol
Mathabo Le Roux
Business Day
7th of August 2007

IN A complete about-turn, the treasury has gone from considering a windfall tax on synthetic fuel producers -- notably Sasol -- to mooted government support to encourage additional investment in the sector.

The treasury yesterday announced its formal decision on recommendations by the windfall tax team to slap a super-profit tax on synfuel production, concurrent with rising oil prices.

Contrary to the proposals in the report, the treasury has opted not to implement a tax on windfall

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profits earned by synfuel producers, "in the interest of a conducive environment for additional investments in domestic fuel security".

The treasury also shunned recommendations for a progressive tax regime for upstream oil and gas companies, and a tax on "must-have volumes" supplied by Sasol in the inland market.

Sasol welcomed the news, as a "win-win outcome for all".

Analysts had cautioned against the tax, saying it would discourage investment in additional fuel capacity at a time when expansion in this sector is regarded as crucial to minimise dependence on the volatile oil market.

The treasury yesterday frankly acknowledged the strategic importance of the synfuels industry to ensure security of supply and macroeconomic stability.

The announcement comes as the petrol industry is scrambling to supply fuel during a debilitating strike and an unnamed commentator yesterday said the current constraints were a good indicator of how badly things could go wrong in the face of supply problems .

Announcing the decision yesterday, Finance Minister Trevor Manuel said imposing a windfall tax would not be appropriate as public intervention at this stage should focus on facilitating the expansion of liquid fuel supply capacity in the interest of domestic energy security and SA's balance of payments.

"We need to be mindful of these issues, so instead of a windfall tax we are opting for a partnership (with players in the liquid fuel industry). We believe the response we're getting from Sasol is a receptive yes. I think we're on a very good wicket with them," Manuel said.

The treasury, in a statement documenting its decision, acknowledged Sasol's unique technology . "It is a matter of national interest", the treasury said, "that Sasol's valuable intellectual capital, co-financed by government ... is further developed to keep SA at the cutting edge of synthetic fuel technology. We have weighed this strategic consideration against the possible benefits of a windfall tax ".

The announcement follows two years of uncertainty in the investment environment over the proposed tax, and Sasol's share price, which had been drifting sideways for most of this period, yesterday closed 4,5% higher at R272,49, bucking the downward trend in the market. Shares of Sasol rose by R13,06, or 5%, to R274,06, their biggest one-day gain since May 22.

Earlier, the company's stock rose as much as 8,8% after the announcement.

The announcement also prompted Sasol to reaffirm its investment commitment to SA.

"We are enthusiastic about the role we can play in enhancing SA's energy security and have started the first phase of significantly expanding existing synthetic fuels capacity in Secunda," CE Pat Davies said .

The group also confirmed it was proceeding with a prefeasibility study into Project Mafutha, a greenfields coal-to-liquids facility in partnership with the government.

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Vunani Securities oil analyst Campbell Parry has previously pointed out that Project Mafutha would require massive capital commitment of between \$6,5bn and \$8bn and would require government incentives .

However, Manuel would not comment yesterday on the likely extent of state support for further investment, saying "it's a long discussion".

"Until the details are on the table it would be hard to respond." He said the decision was "a signal from government, rather than a statement of hope".

But indications are that incentives would be considered in future, with the treasury also announcing that it had initiated an intergovernmental process to promote the long-term development of the domestic liquid fuel industry.

Source: <http://allafrica.com/stories/printable/200708070172.html>

Sasol Plant Named As Top Culprit in Emissions

John Yeld

Cape Argus

8th of August 2007

Sasol's Secunda plant - the largest synthetic fuels facility in the world - is often also cited as the single largest source of greenhouse gas emissions in the world, Parliament's environment portfolio committee has been told.

Increasing concentrations of greenhouse gases in the atmosphere are the major cause of human-induced climate change.

During a briefing yesterday by senior officials from the Department of Environmental Affairs and Tourism and the SA Weather Bureau, committee members also heard that South Africa is the largest contributor to greenhouse gas emissions in Africa, and ranks 25th in the world and 11th in the developing world.

But when assessed in terms of tons of carbon dioxide produced per \$1 000 of Gross Domestic Product (GDP), South Africa overtook the US as early as 1981 and has remained well ahead of both that country and India.

Judy Beaumont, senior policy adviser for climate change in the department who told the committee about the Secunda plant, also explained that South Africa had an extremely greenhouse gas emission-intensive economy, mainly because of its very heavy reliance on burning coal as the primary energy source.

"So we're not doing too well," she said.

Read more at: <http://allafrica.com/stories/printable/200708080651.html>

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Eco-threat to the Waterberg
Edwin Naidu
Sunday Independent
19th of August 2007

Sasol, the South African petrochemical giant, is eyeing pristine property in the mineral-rich Waterberg district to build a multibillion-rand coal liquefaction plant - sparking an outcry from environmentalists and residents.

Sasol's plans to build the plant follow the government's decision to scrap a proposed windfall tax on the synthetic fuel industry.

Freed from the spectre of the extra tax, Sasol will go ahead with its new oil-from-coal plant, said to be earmarked for the Waterberg.

The windfall tax was mooted because of the profits made by synthetic fuel producers on the back of soaring world oil prices.

Marina Bidoli, the Sasol spokeswoman, said the company had begun a pre-feasibility study on a greenfield coal-to-liquids plant in South Africa, known as Mafutha (meaning "the big one" in isiZulu), and the proposed project aimed to help overcome anticipated shortfalls in the supply of liquid fuel products in southern Africa.

"Though we can confirm that both the Waterberg and Free State regions are under consideration, no decision has yet been taken on where a potential plant would be located," she said.

Sasol has already submitted presentations to Sello Moloto, the premier of Limpopo, and Pinkie Kekana, the Waterberg executive mayor, on the planned project.

Bidoli said the proposed plant would have substantial economic spin-offs for the economy, including an expected improvement in the balance of payments worth R40 billion, depending on the prevailing oil price, and the creation of between 5 000 and 10 000 jobs.

The plant could produce 80 000 barrels a day in addition to Sasol's current 150 000 barrels a day being produced at Secunda.

This would result in Sasol's synthetic fuel output increasing by more than 50 percent.

Its cost has not been disclosed. Similar plants Sasol is investigating in China are estimated to cost in the region of between \$5 billion (about R37,5 billion) and \$7 billion each.

Waterberg, in Limpopo, is in the heart of the country's bushveld with low mountain ranges and escarpment. The name Waterberg refers to the fact that the mountains in the area serve as water reservoirs for the arid region.

The area is also one of the most important San rock art repositories in South Africa.

Peet du Plooy, the World Wide Fund for Nature's head of trade and investment, said Sasol should reconsider its plans because it already produced the world's highest number of greenhouse gas

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emissions at Secunda.

"The jobs they promise to create are not that many, but the big concern is not the direct impact on the area but the greenhouse emissions and their impact on climate change would be severe," he said.

"It could end up becoming the biggest greenhouse-gassing plant in the world," he added.

South Africa is responsible for producing 42 percent of greenhouse gas emissions in Africa.

"Already, we are heading towards extinction of vegetation, forests and animal life and, in time to come as the emissions worsen, all biodiversity will be wiped out.

"If we can't stop this, we cannot expect the rest of the world to do so," Du Plooy said.

He said it was possible that Sasol was trying to fast-track the project to fend off growing global feeling from both environmentalists and corporate investors that companies they work with should declare their greenhouse gas emissions and how they are dealing with it.

Eskom produces 200 million tons of greenhouse gas emissions a year, Shell 105 million tons and Sasol 70 million tons.

Tristen Taylor, the energy policy officer of Earthlife Africa, said the organisation would oppose plans to construct a plant in Waterberg or Free State because Sasol's existing operation in Secunda was already the top carbon emission producer in the world.

"I am not in favour of them building such a plant, especially since they are not paying their fair share in taxes," he said.

"It seems like a deal has been struck between Sasol and the government because Sasol has been threatening over the past months to take money overseas to build plants," he said.

Brian Havemann, the national director of conservation for the Wildlife Environment Society of South Africa, said the organisation was not opposed to development provided it was sustainable and adhered to the principles of an environmental impact assessment.

Karel Pretorius, a Waterberg doctor and dendrologist, said such a plant would be harmful to the environment and affect the district's status as a premier tourist destination. "No matter where it is located, such a plant would be a disaster," he said.

Dalane van Coller, the manager of Op de Hoek Guest House in Waterberg, said, should Sasol decide to build the plant in the area, it would have a negative impact on tourism. "It might create jobs, but lead to a drop in tourism. Waterberg is beautiful and uncrowded; such a facility will be an ugly eyesore," she said.

Kekana confirmed that Sasol had made presentations on its plans for the facility, adding that she welcomed investment in the province because it would create jobs and help eradicate poverty.

"Whatever comes into the province, however, would have to take into account our rich biodiversity, and would have to comply with environmental impact assessment requirements. We will jealously guard our environment," she said.

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Mohammed Kharva, an analyst at Nedcor Securities, said that, although it had not been confirmed, the Waterberg seemed to be the most likely location for the plant, but one would have to consider the impact such a plant would have on the water supply in the area. "The pre-feasibility study will take this and the environment into account," he said.

Kharva added that increasing capacity in terms of fuel production would have little impact on fuel prices unless the market was deregulated.

Mogale Nchabeleng, the spokesman for Moloto, said the proposed project would boost the economy but it would not be at the expense of other industries. He said it could have an impact on tourism but one could not gauge the extent of that until it happened.

"We welcome any investment into the province and hope it will strengthen the local community and contribute to the country," he said.

The department of minerals and energy has given Sasol's plans its backing, according to a spokesperson, who said that, with oil prices as high as they were, it made financial sense for Sasol to invest in the project.

This month, Trevor Manuel, the minister of finance, in announcing the scrapping of the proposed windfall tax, said the government would hold Sasol to its commitment to expand its synthetic fuel production capacity in support of the national interest in terms of fuel security and macroeconomic stability.

Source: <http://www.sundayindependent.co.za/index.php?fArticleId=3990745>

SA's R400bn nuke plan
Melanie Gosling
The Cape Times
20th of June 2007

South African taxpayers will have to fork out R400-billion to pay for Eskom's planned nuclear programme, an independent study has revealed. The cost of decommissioning the proposed nuclear power stations at the end of their lives will add several hundred billion rand to the bill.

The study found that this massive expenditure would not solve South Africa's energy crisis, as the proposed nuclear power plants were unlikely to make a significant contribution to the national grid before 2020.

Eskom is forging ahead with the proposed nuclear programme in an energy policy "vacuum" as South Africa has no integrated energy plan, while the public, who will foot the massive nuclear bill, has had no chance to have its say.

Read more at:

http://www.iol.co.za/index.php?set_id=1&click_id=124&art_id=vn20070620021332177C490200

5. SA Energy Policy & Analysis

Biofuels Update: Tito and Mosibudi Speak Up By Lerato Maregele

The South African Reserve Bank chief Tito Mboweni is one of the few who are strongly opposing the use of maize to produce ethanol, acknowledging the fact that this may push up the maize prices. He described the use of maize in ethanol as “a not so very thought-out process” and said a wiser crop would be sugar cane. He also made clear that SA is in short of maize and that it (SA) suffers from frequent droughts. Source: Sunday Times, 5th Aug 07, “Mboweni pours cold water on plan for biofuel maize”.

The Science and Technology Minister, Mosibudi Mangena, was quoted saying that, “the government will not be able to develop the legislation this year that would set out policy on biofuel production” and that the consultations were still taking place. He said various stakeholders from the DME, Agriculture and Land Affairs, and Environment and Tourism were still making inputs, and that the parliamentary subcommittees on biofuels were expected to report by the end of the year. Also he emphasized on the point that SA will look into sugar cane for bio ethanol production. Source: Business Day, 31st July 07, “Government seeking biofuels clarity and bioethanol industry can provide thousand of jobs”.

SECCP welcomes the questioning of using food crops for biofuel production and is still advocating the development of a strategy for biomass energy, with liquid fuels as one option. Job creation and poverty reduction should be explicitly highlighted as primary objectives, on a par with energy and food security.

Powering South Africa: Can Eskom come clean?
www.climatechangecorp.com
16th of August 2007

Coal-dependent electricity provider Eskom has the weight of South Africa’s carbon emissions on its shoulders. Markus Reichardt and Zara Maung report

Internationally, 36% of the world’s electricity is generated by coal, but in South Africa and Poland the figures are 91% and 92%, respectively. For years, South Africa’s national electricity provider Eskom has pursued a policy of providing cheap, coal-powered electricity in order to support economic growth.

Eskom has recently begun to calculate its greenhouse gas emissions, however. According to its 2007 annual report, released in July, the utility generated 208 million tonnes of CO₂ equivalent over the past year, making Eskom the largest emitter of greenhouse gases on the African continent. Its emissions equate to approximately half of South Africa’s total.

The country’s main coal producers include BHP Billiton, AngloCoal and South African companies Sasol Coal and Exxaro, the largest black-owned coal miner. Some of them have signed long-term contracts to supply Eskom with coal for years into the future. In total, the mining companies produce just under a quarter of a billion tonnes annually, making South Africa the fifth largest

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producer of coal in the world.

Should the carbon buck stop with Eskom?

According to its 2007 report, Eskom remains wedded to coal for the foreseeable future. Its only shareholder – the South African government – is now left considering how to reconcile its domestic policies to encourage growth, with the international commitments it will be pressured to make to curb emissions post-2012.

The government's current renewable energy targets currently stand at a modest 2% of electricity demand by 2012.

Eskom's continued reliance on coal is being perpetuated through long-term contracts with coal mining companies such as Exxarro....

....Those hoping for immediate investment in renewables are left pinning their hopes on Valli Moosa, president of the World Conservation Union (IUCN) and former minister of the environment, who has been chairman of the Eskom board of directors since 2003.

Under his watch, there are already indications that a 100 megawatt wind farm project, the plans for which have languished long on Eskom's project shelf, may get the go-ahead during 2007. Only one wind farm, situated on the outskirts of Cape town, so far exists in South Africa and it was set up independently of Eskom.

The most advanced clean coal technology option currently being investigated by Eskom is underground coal gasification (UCG), currently the subject of a pilot plant study at Majuba power station....

...South Africa's current positive economic growth, driven in part by the commodities boom, places Eskom in a quandary. It claims to be investigating ways of including renewables in the energy mix, but it does so against a background of a large-scale backlog of electricity for basic consumption.

In response to this energy crisis, Eskom has demonstrated a narrow range of practical ways in which demand-side management could contribute to achieving both goals at a household level.

By handing out free low-energy lightbulbs to low-income households on the Western Cape, the utility not only brought down peak loads, but also structurally reduced its electricity consumption and thus expenses.

Similarly, its efforts to educate more affluent consumers to shift the use of pool pumps, washing machines and dishwashers away from peak load periods has resulted in the dual benefit at individual household level of reducing demand and energy expenditure.

Through a variety of projects completed in 2006, Eskom claims that emissions equivalent to 271,000 tonnes of CO₂ were avoided, but this against the backdrop of its total emissions: 203million tonnes of CO₂ equivalent, up from 197.6million in 2005.

Solar solutions are obvious

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In February 2007, Eskom also announced that it was working on plans to offer South African households and businesses an incentive to install solar water heaters. Andrew Etzinger, Eskom's general manager for investment strategy, says that solar water heating is a priority for the company, which plans to roll it out on a large scale.

Households account for approximately 33% of Eskom's demand, with the biggest electricity usage coming from heating water in conventional water heaters.

A pilot project during 2006/7 has revealed that solar water heater installation can cut between 30% and 50% from water-heating bills, often saving households hundreds of Rands a month.

Irrespective of the personal savings, there are substantial CO2 emission implications. The installation of 120,000 to 150,000 of such units – which cost about R8,000 each – would eliminate the need to build another conventional “six-pack” coal-fired Eskom power station.

Read the whole article at: <http://www.climatechangecorp.com/content.asp?ContentID=4896>

6. African Energy News

The dark continent

The Economist

Aug 16th 2007 | DAR ES SALAAM

Power shortages have become one of the biggest brakes on development

SEEN from space, Africa at night is unlit—as dark as all-but empty Siberia. With nearly 1 billion people, Africa accounts for over a sixth of the world's population, but generates only 4% of global electricity. Three-quarters of that is used by South Africa, Egypt and the other countries along the north African littoral.

The need for more power stations in the rest of the continent has long been recognised, but most of the attempts at electrification in the 1970s and the 1980s failed. In some countries, dictators pillaged power stations for parts and fuel. In others, power stations were built but not maintained. Turbines were run at full capacity until they broke, then were abandoned. By some counts, only 17 of Nigeria's 79 power stations, many dating from this period, are still working; the country's demand for power is an estimated 7,600 megawatts, against an actual operating capacity of 3,500MW. The World Bank reckons that 500m sub-Saharan Africans are without what it calls “modern energy”.

The situation is bound to get worse as the demand for power continues to grow. Africa's relatively healthy economic growth of recent years begets factories and shopping centres—and power cuts galore. Whenever demand outstrips supply, the lights go out—several times during the writing of this story.

Read more at: http://www.economist.com/world/africa/PrinterFriendly.cfm?story_id=9660077

Beyond oil and gas, Algeria aims to tap vast sunbelt to export solar energy to Europe

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The Associated Press
Thursday, August 9, 2007

ALGIERS, Algeria: It's a vision that has long enticed energy planners: solar panels stretching out over vast swaths of the Sahara desert, soaking up sun to generate clean, green power.

Now Algeria, aware that its oil and gas riches will one day run dry, is gearing up to tap its sunshine on an industrial scale for itself and even Europe.

Work on its first plant began late last month at Hassi R'mel, 420 kilometers (260 miles) south of Algiers, the capital. The plant will be a hybrid, using both sun and natural gas to generate 150 megawatts. Of that, 25 megawatts will come from giant parabolic mirrors stretching over 180,000 square meters (nearly 2 million square feet) — roughly 45 football fields.

Experts say it's the first project of its kind to combine gas and steam turbines with solar thermal input in a hybrid plant.

The plant should be ready in 2010, and the longer-term goal is to export 6,000 megawatts of solar-generated power to Europe by 2020, about a tenth of current electricity consumption in Germany.

"Our potential in thermal solar power is four times the world's energy consumption so you can have all the ambitions you want with that," said Tewfik Hasni, managing director of New Energy Algeria, or NEAL, a company created by the Algerian government in 2002 to develop renewable energy.

The project is still at an early stage and faces daunting financial and technological obstacles. Solar power's supporters say it will take 10 years for it to become economically competitive, and while undersea cables to Sicily and Spain are planned for construction in 2010-2012, it isn't known who will finance them.

Read more at:

<http://www.iht.com/articles/ap/2007/08/10/africa/AF-FEA-GEN-Algeria-Solar-Sahara.php>

South Africa gives 200 mln USD to DRC for power project

Xinhua

19th of June 2007

South Africa will fund the construction of an interconnection grid to facilitate the distribution of electricity from the Inga power generation plants to various provinces in the Democratic Republic of Congo (DRC) at a cost of 200 million U.S. dollars.

Speaking in an interview which was aired Sunday on Top Congo, a private radio station, DRC's energy minister Salomon Banamuhere said this was one of the agreements which were concluded during DRC's President Joseph Kabila Kabange's visit to South Africa from June 3 to June 5, 2007.

The minister, who, among other ministers, was part of the delegation that accompanied the president during the visit, said the funds will notably be used to finance the construction of a substation at Tshimbulu, southern DRC, to help tap electricity from the Inga-Katanga high voltage

line.

As a client, South Africa is very interested in the electricity potential of the Grand Inga scheme, particularly with regard to the planned Inga III power project, for which funds for feasibility studies have already been allocated, the minister said before adding that South Africa and all the other Southern Africa countries were keen to benefit from the electricity produced at Inga.

Meanwhile, only 5 percent of DRC's population has access to electricity, with Kinshasa, capital of the country itself, being poorly served.

Commissioned in 1972, the Inga I power plant has a production capacity of 351 MW while Inga II, which has been in operation since 1982, produces another 1,424 MW. Inga III, under implementation, will produce 3,500 MW. At the moment, Inga I and II are operating at 20 percent of their capacity, with most turbines not running, owing to lack spare parts.

Source: http://english.people.com.cn/200706/19/eng20070619_385406.html

Besa to help NamPower expand
I-Net Bridge
20th of June, 2007

Johannesburg - Namibia's national power utility NamPower plans to raise R3 billion to fund the expansion of its transmission network to Zambia through the South African marketplace.

The Caprivi Link Interconnector project will establish a link between the Namibian, Zambian and South African electricity networks.

The project is expected to be completed in 2009 and will provide Namibia with an alternative source of foreign energy and lessen its current dependence on South Africa, NamPower said.

At least 50 percent of the R3 billion will be raised in the South African and Namibian capital markets through a rand-denominated, long-term debt issue that will be dual-listed on the Namibian Stock Exchange and the Bond Exchange of South Africa.

Read more at:
<http://www.busrep.co.za/index.php?fArticleId=5017428&fSectionId=552&fSetId=662>

Eskom in serious talks on Botswana power project
Engineering News
Terence Creamer
3rd of August 2007

Africa's leading power utility, which is planning to nearly double its installed base of generation capacity to 77 960 MW by 2025, has confirmed that nuclear energy will constitute about half of those additional megawatts. But Eskom CEO Jacob Maroga tells Engineering News that the State enterprise is also keeping close tabs on generation prospects in the Southern African region, which he believes could be supportive of its aspirations to spread risk, decrease pressure on limited

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in-house financial and technical resources, as well as in diversifying its primary-energy mix.

The utility has taken a strategic decision not to rely on imports for more than its 'optimal' reserve margin of 15% – its reserve margin is likely to remain in the 8% to 10% band until new base-load capacity is added from 2011 through to 2013. Nevertheless, 15% of nearly 80 000 MW is material, standing at almost 12 000 MW, and could unlock a number of regional projects that potentially require offtake agreements with Eskom to proceed to financial closure.

Maroga reports that it is engaged in serious power- purchase agreement (PPA) negotiations with the initiators of the \$9-billion Mmamabula coal mine and power station project, in Botswana, and that a deal could be struck within months.

Read more at: http://www.engineeringnews.co.za/article.php?a_id=113265

7. Events

Appeal to Readers: The Department of Minerals and Energy is rumoured to be holding an uber-important conference in the 3rd quarter of this year. If anyone has information about this, please do let us know. We are interested.

August 2007

CLIMATE CHANGE ACTION AFRICA

Date: 28th to 30th August 2007

Venue: Midrand, Johannesburg, South Africa

Contact: +27 (0)11 669 5000

E-mail: info@iqpc.co.za

Note: SECCP Coordinator will be chairing

September 2007

24TH ANNUAL INTERNATIONAL PITTSBURGH COAL CONFERENCE

Date: 10th to 14th September

Venue: Johannesburg, South Africa

Contact: Dr Nicola Wagner, Coal and Carbon Research Group, School of Chemical & Metallurgical Engineering, University of Witwatersrand

Tel: 011 717 7540

Cell: 082 853 9780

E-mails: Nicola.Wagner@wits.ac.za and pcc@engr.pitt.edu (Conference Secretary)

RISK MANAGEMENT IN ELECTRICITY TRADING

Date: 26th to 27th September

Venue: London, UK

Contact: International Faculty of Finance

Tel: +44 (0) 20 7017 7190

Fax: +44 (0) 20 7017 7802

Website: www.iff-training.com

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October 2007

6TH WORLD WIND ENERGY CONFERENCE AND EXHIBITION 2007 (WWEC – 2007)

Date: 2nd to 4th October

Venue: Mar del Plata, Argentina

Contact: The World Wind Energy Association (WWEA) Head Office, Charles-de-Gaulle Street 5,
53113, Bonn, Germany

Tel. +49 228 369 4080

Fax +49 228 369 4084

E-mail: secretariat@wwindea.org

Websites: www.wwindea.org and www.wwec2007.org

ENERGY EFFICIENCY AT WORK

Date: 25th to 26th October

Venue: Emperors Palace, Gauteng, South Africa

Contact: Christina den Heijer

Tel: +27 (0)18 294 7174

Cell: +27 (0) 82 334 0923

E-mail: cemanager@intekom.co.za

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