



SACREE to be launched by September

THE PROPOSED SADC Centre for Renewable Energy and Energy Efficiency (SACREE) is expected to be launched by September 2014 under a revised roadmap agreed by SADC and development partners.

United Nations Industrial Development Organisation (UNIDO) Sustainable Development Specialist, Nokwazi Moyo told a meeting of the SADC Energy Thematic Group held in Botswana in February that the revised roadmap envisages a preparatory phase that would run from January to July 2014.

This would be followed by the first operational phase running for three years, which includes the official launch by September this year.

He, however, noted that ministerial endorsement of the centre was critical for the success of the process and reiterated the need for more lobbying at higher level within the Member States.

SADC was working closely with UNIDO to accelerate implementation within the revised timelines

The proposed centre would, among other things, spearhead the promotion of renewable energy development in the region.

It is expected to contribute substantially to the development of thriving regional renewable energy and energy efficiency markets through knowledge sharing and technical advice in the areas of policy and regulation, technology cooperation, capacity development, as well as investment promotion.

It has been agreed that the centre should be an independent SADC institution that should be owned and supported by SADC member states for sustainability purposes.

Such a development would give the centre more authority to spearhead efforts to increase the uptake of renewable energy sources in the region.

Various cooperating partners such as UNIDO and the Austrian Development Agency have pledged to provide financial support to the centre for the first three years. After that, the centre should be self-sustaining. The location of the centre is yet to be decided although Moyo indicated that a number of SADC countries had expressed interest in hosting it.

Establishment of the SACREE is expected to see a gradual increase in the uptake of cleaner energy sources that could result in reduced carbon emissions in line with the global trends towards clean and alter-

According to the African Development Bank (AfDB), the region has the potential to become a “gold mine” for renewable energy due to the abundant solar and wind resources that are now hugely sought after by international investors in their quest for clean energy.

For example, the overall hydropower potential in SADC countries is estimated at about 1,080 terawatt hours per year (TWh/year) but capacity being utilised at present is just under 31 TWh/year. A terawatt is equal to one million megawatts.

The SADC region is also hugely endowed with watercourses such as the Congo and Zambezi, with the Inga Dam situated on the Congo River having the potential to produce about 40,000 MW of electricity, according to the Southern African Power Pool.

With regard to geothermal energy, the United Nations Environment Programme and the Global Environment Facility estimate that about 4,000MW of electricity is available along the Rift Valley in the United Republic of Tanzania, Malawi and Mozambique.

Austria supports solar technology training

AUSTRIA IS supporting a training project on solar technologies being implemented with educational institutions, renewable energy institutions and companies in Mozambique, Namibia, Zimbabwe and South Africa.

The main objective of the SOLTRAIN project is to help wean the southern African region from the use of environmentally unfriendly fossil fuels and promote usage of renewable energies, with the spotlight on solar water heating.

SOLTRAIN is a three-year project to enhance solar thermal technology in southern Africa.

The focus on solar thermal systems is deliberate because solar radiation levels in SADC are high, and these systems can readily be manufactured or assembled in the region.

Solar thermal systems such as solar water heating have a huge potential to alleviate the serious problems of unemployment, power supply, energy costs, and pollution.

SAPP to commission 5,500MW new generation capacity

SOUTHERN AFRICA expects to commission new power projects in 2014 that will add about 5,500 megawatts of electricity to the regional grid as the region targets to attain energy self-sufficiency within the next four years, according to the Southern African Power Pool (SAPP).

New and rehabilitated energy generation projects planned for commissioning this year are expected to add about 6,141MW of electricity, but 685MW of the new capacity will come from Angola and the United Republic of Tanzania which are not interconnected to the regional grid.

The power will come from South Africa, which is expected to commission 4,936MW this year, Zambia (195MW), Mozambique (175MW) and Botswana (150MW).

GENERATION PROJECTS -2014 TARGET					
No	Utility	Country	Name	Type	Capacity [MW]
1	ENE	Angola	Lomaum	Hydro	65
2	ENE	Angola	CFL New	Coal	70
3	ENE	Angola	BIOCOM	Coal	50
4	ENE	Angola	BOM-JESUS	Coal	50
5	IPP	Tanzania	Kinyeredzi	Gas	150
6	IPP	Tanzania	Sao Hill	Gas	10
7	IPP	Tanzania	Somanga	Gas	290
8	Eskom	RSA	OCGT	Gas	800
9	Eskom	RSA	Medupi	Coal	722
10	Eskom	RSA	Ingula	Hydro	1332
11	IPP	RSA	Cogen	Gas	100
12	IPP	RSA	Sere	Wind	100
13	IPP	RSA	RE - Round 1	PV, CSP, Solar	1328
14	IPP	RSA	RE - Round 2	PV, CSP, Solar	554
15	IPP	Mozambique	Ressano Garcia	Gas	175
16	BPC	Botswana	Morupule	Coal	150
17	ZESCO	Zambia	Kariba North	Hydro	180
18	ZESCO	Zambia	Lunzua	Hydro	15
TOTAL					6141

In line with a regional target to gradually increase the uptake of cleaner energy sources by 2020, about 36 percent of the planned new interconnected capacity in 2014 will be from renewable energy sources, which will be produced by independent power producers in South Africa.

Part of this will come from the Sere Wind Farm in the Western Cape region that is expected to be one of the largest wind farms in southern Africa, producing 100MW on completion.

Concentrated solar power (CSP) projects are expected to add more than 1,800MW to the grid. CSP systems use mirrors or lenses to concentrate a large area of sunlight onto a small area.

Electrical power is produced when the concentrated light is converted to heat, which drives a heat engine connected to an electrical power generator.

Southern African countries agreed in 2012 to increase the uptake of cleaner energy sources that result in reduced carbon emission.

This follows the adoption of a wide-range of strategies aimed at aligning the region with new trends in the global energy sector, which now favour renewable energy as opposed to fossil fuels.

Meeting in Botswana in April 2012, energy experts from the region agreed that SAPP should achieve a renewable energy mix in the regional grid of at least

32 percent by 2020 and 35 percent by 2030.

They also agreed that Member States must identify all renewable energy projects that can be connected to the regional grid and that SAPP should develop a Renewable Energy Development Plan that lists projects according to priority, which should be linked to the SADC Regional Infrastructure Master Plan.

It was agreed that by 2015 all SADC Member States and SAPP should have assessed their grid capacity for renewable energy and identified requirements for grid upgrades, if any; and that all countries should have undertaken strategic environmental assessments for the various renewable energy types in their countries.

South Africa wants to join ZiZaBoNa

SOUTH AFRICA has expressed interest to participate in the ZiZaBoNa project, an electricity transmission interconnector that currently involves Zimbabwe, Zambia, Botswana and Namibia.

According to Southern African Power Pool (SAPP) chief engineer Alison Chikova, South African power utility, Eskom, has finalised internal due diligence exercise to establish the financial and commercial implications of joining the ZiZaBoNa project.

He said Eskom was expected to appoint consultants in March who will advise on the modalities of becoming part of the project.

The ZiZaBoNa Lawyers Committee looked at the project's Shareholders Agreement, under which the respective power utilities from the four countries will have equal shareholdings and are all expected to finance parts of the project that fall within their national boundaries.

The transmission interconnector project has the capacity to increase power trading among participating utilities, as well as provide an alternative power transmission route and help decongest the existing central transmission corridor that currently passes through Zimbabwe.

The ZiZaBoNa project will help to provide another wheeling path and, therefore, increase trade between the northern and southern parts of SADC.

The initial capacity of the transmission interconnector will be 300 megawatts (MW), which will later be increased to 600MW.

The project is to be implemented in two phases. The first phase will cover the construction of a 120-kilometre 330 kilovolt line from Hwange Power Station to Victoria Falls where a switching station will be built on the Zimbabwe side. The line will extend to a substation at Livingstone in Zambia.

The second phase will involve the construction of a 300km 330kV line from Livingstone to Katima Mulilo in Namibia, through Pandamatenga in Botswana. The Zimbabwe-Zambia interconnector will be built as a high voltage line with a transmission capacity of 430kV.

Lack of data delays tariff status report

LACK OF data is affecting the finalisation of a regional status report on the level of electricity tariffs in southern Africa.

Regional Electricity Regulators Association of Southern Africa (RERA) Executive Secretary Elijah Sichone said finalisation of a regional status update on tariffs was being hindered by delayed and/or incomplete data submissions from Member States.

He said regulatory bodies from only six SADC Member States had submitted data on their tariffs while partially completed or no returns had been received from the remaining nine countries.

Completed forms have been received from regulators in Lesotho, Namibia, South Africa, Swaziland, Zambia and Zimbabwe.

“RERA needs urgent assistance to finalise the status update, including timely and sustained data collection/submission for publications,” Sichone said during the 13th meeting of the SADC Energy Thematic Group held in Gaborone, Botswana, in February.

RERA has since 2010 worked with the SADC Secretariat and the Southern African Power Pool to produce an Annual SADC Electricity Tariffs and Selected Performance Indicators.

This flagship regional publication has served as an essential information aid on regional trends pertaining to electricity supply industry tariffs and selected performance indicators for governments, regulators, utilities, non-governmental organizations, academia, investors and other interested parties

Evidence has mounted of low tariffs negatively affecting southern Africa, and consensus has increasingly emerged about the severity and likely impact of this problem.

Existing SADC energy tariffs do not provide the right signals for new investment and energy conservation, efficiency and substitution practices by consumers.

A survey conducted by RERA with support from the Southern Africa Global Competitiveness Hub (USAID Trade Hub) in 2009 showed that the region’s energy sector is not self-sustaining. According to the survey, electricity tariffs within the SADC region range from 2.7 US cents per kilowatt hour (kWh) to 12.5 USc/kWh.

In some cases, the cost of generating the electricity is higher than what the utilities are charging.

For example, hydroelectricity generation – which is the second most common method of producing power in the region after coal – costs between 6 and 8 USc to produce a kWh while it costs an average 7.5 USc to make a kWh of electricity at any of the coal-fired power stations.

The survey showed that Angola and the United Republic of Tanzania had the highest tariffs in the region, at 12.5USc/kWh and 12USc/kWh, respectively. Zambia had the lowest electricity tariffs at 2.7USc/kWh followed by the Seychelles (3.2USc/kWh) and South Africa (3.7USc/kWh).



Seychelles sets up energy regulator

SEYCHELLES HAS become the latest SADC Member State to create an institution to regulate operations of the energy sector.

The newly formed Seychelles Energy Commission (SEC) becomes the 12th energy regulator in the SADC region.

Other regulatory bodies exist in Angola, Lesotho, Madagascar, Malawi, Mozambique, Namibia, South Africa, Swaziland, United Republic of Tanzania, Zambia and Zimbabwe.

The remaining three SADC Member States (Botswana, the Democratic Republic of Congo and Mauritius) are at various stages of energy sector reforms.

Of the 12 Member States with regulatory bodies, four are electricity regulators, six are energy regulators and two are multi-sector (energy/water) regulators

The electricity regulators are the Institute for Electricity Sector Regulation of Angola, ORE, National Electricity Advisory Council (Mozambique), and Electricity Control Board (Namibia).

Energy regulators available in the region are the Malawi Energy Regulatory Authority, SEC, National Energy Regulator of South Africa, Swaziland Energy Regulatory Authority, Energy Regulation Board (Zambia), and Zimbabwe Energy Regulatory Authority.

The multi-sector regulatory bodies are the Lesotho Electricity and Water Authority and the Energy & Water Utilities Regulatory Authority (Tanzania).



Energy ministers meeting postponed

THE 34TH meeting of SADC Energy Ministers scheduled for March in Malawi has been postponed to a later date due to the ongoing campaigns ahead of that country's general elections set for 20 May.

Members of the SADC Energy Thematic Group (ETG) heard during a meeting in Gaborone, Botswana, in February that due to the elections in Malawi it was not be practical to hold the meeting in March as scheduled and that a new date needed to be agreed upon.

The ETG also agreed that the International Cooperating Partners for the SADC energy sector should facilitate a ministerial dialogue on a specific thematic energy topic during the ministers meeting.

The ministers traditionally meet in March/April to review the power situation in the region in an effort to ensure that supply and demand are evenly matched.

Discussions are expected to focus on the status of implementation of key decisions made at the last meeting held in Lesotho in 2013.

These include status of priority generation and transmission projects identified in the SADC Regional Infrastructure Development Plan as well as plans to adopt cost-reflective tariffs in the region and other measures to improve the business environment for investors.

The region continues to lag behind in implementing a number of its energy generation and transmission projects as investors shun some of the projects due to various reasons such as low incentives and long tender procedures.

The slow off-take of identified projects has had a negative impact on the economies of most Member States and the situation could worsen if southern Africa fails to address the problem as a matter of urgency.

A majority of SADC countries are experiencing energy shortages, which were predicted as early as 1999 yet little has been done over the years by way of new investment in major power generation projects to arrest the problem.

The current energy shortages are despite the enormous generation potential that exist in the region ranging from renewables such as hydro, wind, gas to solar power.

While significant progress has been made by the Regional Electricity Regulators Association of Southern Africa (RERA) in coming up with scenarios to make tariffs more viable, most SADC countries are yet to fully adopt the recommendations as various issues still have to be taken into consideration, including affordability of energy to less privileged citizens.

Events Diary

April

9-10, South Africa	Inaugural Wind Energy Summit South Africa
13-15, Germany	8th German-African Energy Forum 2014
23-24, Ghana	Sub-Saharan Africa Solar Conference 2014
22-24, Nigeria	Africa Clean Energy Summit
27-29, Kenya	Power & Energy 2014

May

8-9, Mozambique	Powering Africa 2014
13-14, South Africa	Clean Power Africa 2014
13-14, South Africa	African Utility Week
19-20, Zambia	Power Quality Workshop

June

4-5, Tanzania	Tanzania Renewable Energy Day
4-6, USA	First Annual Sustainable Energy for All (SE4ALL) Forum
9-13, UK	Africa Arising Conference
18-20, Turkey	Africa Energy Forum 2014
19-20, South Africa	African Student Energy Summit
23-24, South Africa	Renewables and Mining Summit 2014
24-25, Zambia	4th Zambia International Mining and Energy Conference
24-26, Spain	3rd International Conference on Biodiversity & Sustainable Energy Development

August

21-23, India	5th World Renewable Energy Technology Congress
26-28, China	6th Guangzhou International Solar Photovoltaic Exhibition

September

6-9, Egypt	Cairo Energy Oil and Gas International Conference & Exhibition
23-25, Cameroon	Africa Petroleum Storage and Transport Conference and Exhibition
TBA, Mozambique	43rd SAPP Meetings