



# TORs for SADC ETG

**SADC AND** its International Cooperating Partners (ICPs) have come up with terms of reference (TORs) that outline the framework for future cooperation in the SADC energy sector.

The SADC Energy Thematic Group (ETG) TORs are based on the recommendations of a review of the 2006 Windhoek Declaration on a New Partnership between SADC and the ICPs, which recommended, among others, the designing of effective dialogue between the two sides.

The Windhoek Declaration called for the establishment of thematic groups as a platform to give attention to specific priorities in SADC on a sector basis. It was envisaged that the thematic groups would provide an opportunity to pool resources towards the realization of the main SADC priorities.

However, a review of the Windhoek Declaration initiated by SADC and the European Union in 2012 recommended the strengthening of SADC-ICP dialogue platform to facilitate enhanced and more strategic dialogue, while adhering to the priorities and interests of SADC and the ICPs.

The review recommended that all SADC sectoral thematic groups should have clear TORs and action plans.

In the case of the SADC energy sector, the main purpose of the TORs is to define the objectives, main tasks, functions and composition of the ETG, providing a framework to managing sectoral activities and allow monitoring of the progress.

The review noted that considering the growing number of initiatives targeting the various sectors, the thematic groups faced a serious challenge of ensuring effective coordination and consolidation of efforts by ICPs towards the common agenda.

Four main issues were singled out as being particularly important in making the partnership commitments effective. These included:

- ensuring that SADC has ownership and leadership of donor-funded initiatives and that ICPs better align their interventions to SADC medium-term strategies and corporate plans;
- need to strengthen linkages between regional and member state development strategies, and better alignment between national and regional

- SADC-ICPs' partnership strategy should integrate other dialogue frameworks between the two sides based on bilateral engagement and global and continental consensus and position.

The TORs will be complemented by an action plan for the ETG that sets out specific programmes and projects for a particular year as well as the tasks and responsibilities of all ETG members.

The action plan aims to concretise SADC-ICP commitments towards an effective partnership dialogue based on the principles of Windhoek Declaration, the SADC Strategy Development, Planning, Monitoring and Evaluation Policy, the SADC Medium Term Strategy, the SADC Resource Mobilisation Strategy and Plan, and the SADC-ICP Partnership Statement.

Participation in ETG is voluntary, but in order to improve consistency and efficiency, members of the group would be expected to agree and commit to the TORs.

The purpose of the ETG is to promote SADC's regional potential and ability to utilise its energy resources to fuel its future sustainable growth in line with the Protocol on Energy in the SADC Region, and the Energy Sector Plan of the recently approved SADC Regional Infrastructure Development Master Plan.

As a part of the SADC-ICP dialogue structure, the ETG serves as the technical coordination and advisory group for the partnership between the two sides in the energy sector.

It acts as a forum for dialogue, networking and creation of shared understanding between SADC Secretariat, the ICPs and main regional SADC partners; and for platform for coordinating energy-related assistance at the regional level.

The regular members of the ETG are the SADC Secretariat, SADC member states, ICPs, the Southern African Power Pool (SAPP); the Regional Energy Regulatory Authority for Southern Africa (RERA); and the Southern African Research and Documentation Centre (SARDC).

Other target groups also participate in the ETG as associate members. These include the private sector, international organisations, civil society, multilateral and bilateral financial institutions, and regional

# SAPP targets Virtual Power Station

**THE SOUTHERN** African Power Pool is actively pursuing the concept of a virtual power station as it seeks to augment ongoing efforts to increase electricity generation capacity to beat shortages in the region.

A Virtual Power Station, also known as Virtual Power Plant (VPP), is not a physical power station but makes extensive and sophisticated use of information technology, advanced metering, automated control capabilities, and electricity storage to match short-interval load fluctuations.

The VPP integrates the operation of supply- and demand-side assets to meet consumer demand for energy services in both the short- and long-term.

The VPP concept also makes use of long-term load reduction achieved through energy efficiency investments, distributed generation, and verified demand response on an equal footing with supply expansion.

SAPP has taken significant steps in establishing a Virtual Power Station, and the various energy efficiency projects and Demand Side Management (DSM) programmes being pursued by the regional power pool are building blocks of this initiative.

Faced with an electricity shortfall of about 8,000 Megawatts (MW), the SAPP has been actively promoting energy efficiency technologies such as the replacement of incandescent bulbs with Compact Fluorescent Lamps (CFLs) and solar lamps as well as introduction of the solar water heater programme, hot water load control, and the commercial lighting programme.

Switching from traditional light bulbs to CFLs has been an effective programme by SAPP to reduce energy use at home and prevent greenhouse gas emissions that contribute to climate change.

Research shows that residential lighting accounts for about 20 percent of the average home electricity bill in the SADC region. However, compared to incandescent bulbs, CFLs have been shown to save up to 80 percent of electricity consumption.

Similarly, the hot water load control programme being pursued by SAPP has enabled consumers to install load-control switches that automatically turn off power during peak periods or when appliances such as geysers have reached maximum demand.

Most SAPP member countries have introduced the CFLs on a large scale. Other forms of energy efficiency and DSM programmes are at various levels of implementation.

According to SAPP figures released to the SADC Energy Thematic Group, the target is to save 2,450MW of power this year using these four energy efficiency and DSM initiatives.

The power savings are expected to gradually increase to 6,000MW by 2018, by which time the use of incandescent bulbs would be banned in all Member States and a SAPP Energy Efficiency Framework Document would be in place.

**New Generation capacity 2013-2018**

Country	2013	2014	2015	2016	2017	2018	Total
Angola	-	715	550	2415	-	-	3680
Botswana	600	-	-	-	300	-	900
DRC	55	-	580	-	240	1620	2495
Lesotho	-	25	40	110	-	800	975
Malawi	64	-	-	-	300	100	464
Mozambique	-	150	40	300	300	-	790
Namibia	-	60	-	-	800	500	1360
South Africa	201	3105	2543	1322	3368	1323	11862
Swaziland	-	-	-	-	-	300	300
Tanzania	60	160	500	1110	500	-	2330
Zambia	230	315	600	164	-	830	2139
Zimbabwe	-	-	20	-	1290	770	2080
<b>TOTAL</b>	<b>1210</b>	<b>4530</b>	<b>4873</b>	<b>5421</b>	<b>7098</b>	<b>6243</b>	<b>29375</b>

## 30,000MW of additional power by 2018

**ABOUT 30,000** megawatts of electricity will be added to the southern African power grid over the next five years, with gas fast becoming the future of the region's energy matrix.

According to the Southern African Power Pool, a total of 29,375MW of power is expected to come on stream between 2013 and 2018 if all the new generation plants and rehabilitation works are completed on time.

This would increase total installed capacity in southern Africa to more than 80,000MW and ensure energy self-sufficiency in a region that has suffered crippling shortages during the past few years.

Current installed capacity in the region is estimated at about 57,000MW, of which only 51,000MW is available capacity. Of that amount, just about 49,000MW is available on the interconnected SAPP grid.

According to the plan, South Africa will contribute about 11,862MW of new electricity over the next five years or more than 40 percent of anticipated additional power for the region.

Other significant generation capacity additions are expected to come from the Democratic Republic of Congo, Tanzania, Zambia and Zimbabwe, which will collectively contribute more than 9,000MW of power to the regional grid.

Hydropower stations are expected to dominate the number of power generation plants planned during the period, with 24 new or rehabilitated plants planned until 2018 compared to 17 coal-fired stations.

At least eight generation and rehabilitation projects are due for commissioning this year, adding a total of 1,210MW of power to the region.

These include the 600MW Morupule B Thermal Station in Botswana, the 50MW independently operated Ndola Energy Power Station in Zambia, and the Inga 1 Hydropower Station in the DRC, which will contribute 55MW when commissioned.



# Cost-reflective tariffs target unachievable

**SADC MEMBER** States are unlikely to meet the 31 December deadline for migrating to cost-reflective electricity tariffs due to challenges in raising local tariffs too fast in relations to consumer income and inflationary impacts.

SADC Energy Ministers adopted the principle of cost-reflective tariffs as far back as 2004 and that decision was reaffirmed in April 2007.

In 2008, meeting in Lusaka, Zambia, the SADC Council of Ministers approved the migration towards full cost recovery within five years, setting a deadline of 31 December 2013.

Although significant progress has been made by the Regional Electricity Regulators Association of Southern Africa (RERA) in developing scenarios to make tariffs more viable, most SADC countries are yet to fully adopt the recommendations as various issues still have to be considered, including affordability to low-income consumers.

“It is observable that no SADC Member State would comply with the SADC Council to reach full cost recovery tariffs by end of 2013,” RERA Chairperson Phindile Baleni told the SADC Energy Thematic Group in Botswana in September.

Existing SADC energy tariffs do not provide sufficient profit for new investment and incentive for energy conservation, efficiency and substitution practices by consumers.

According to Baleni, only four SADC Member States have tariffs “that are able to provide the right signals for new investment and efficient use of electricity.” These are Madagascar, Seychelles, Swaziland and Zambia.

However, none of these countries are likely to attain cost-reflective tariffs before 2016 due to a number of factors, include the low-income population the region and the need for strategies that promote energy access and pro-poor tariffs.

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.

Electricity tariffs within the SADC region range from 2.7 US cents per kilowatt hour to 12.5 USc/kWh.

A delicate balancing act is needed to ensure that any new viable tariffs introduced do not exclude the vulnerable communities or industries in the region.

This calls for regional policies that allow for minimum level of supply while guaranteeing electrification support mechanisms for poorer communities and emerging businesses.



## Mini-grids framework on the cards

**THE REGIONAL** Electricity Association of Southern Africa (RERA) is in the process of developing a framework for mini-grids to improve access to electricity in the region.

RERA chairperson Phindile Baleni told a recent meeting of the SADC Energy Thematic Group held in Botswana that technical assistance for the development of the framework started in January this year and was expected to end in December.

The SADC region faces major challenges in achieving improved access to modern energy services.

Studies show that overall household access to electricity in the region remains persistently low – as low as 14 percent in some member states. More critically, the electrification rate for rural households is as low as 3-4 percent in several countries.

It is generally agreed that grid extension alone will not suffice to meet the need for electrification.

Development of mini-grids is expected to play a significant role in improving energy access in the region. This will require the development of supportive policy, regulatory and institutional frameworks.

RERA with support from the SADC Secretariat has been working with the Africa-EU Renewable Energy Cooperation Programme (RECP) to develop supportive framework conditions for mini-grids employing renewable and hybrid generation in southern Africa.

The purpose of the project is to encourage development of supportive policies to enhance the framework conditions for mini-grids based on renewable or hybrid systems among SADC members.

Such policies will facilitate investment by public and private actors in mini-grids in the SADC region.

The technical assistance is focusing on developing a range of policy and regulatory options for the planning and development of mini-grids, including identification of solutions appropriate to different energy resource mixes and different economic circumstances.



# SADC embraces C-3E initiative

**SOUTH AFRICA** has been tasked to champion the SADC Clean Energy Education and Empowerment (C-3E) Initiative aimed at empowering women to contribute to decision-making processes involving the uptake of renewable energy products and technologies.

The SADC C-3E Initiative is part of the global initiative launched at the first Clean Energy Ministerial Meeting held in Washington DC, United States, in July 2010.

The event brought together ministers from 20 countries and created a forum to empower women to contribute to clean energy and actively participate in the clean energy revolution.

South Africa was chosen to spearhead the initiative in Africa and already has an active C-3E programme in place.

Ministers responsible for energy and power development in SADC adopted the C-3E Initiative at their meeting in Lesotho early this year as one of the flagship projects and tasked South Africa to champion the programme in the region.

The purpose of the C-3E initiative is to connect and inspire women to actively participate in the clean energy revolution and contribute to the creation of new technologies.

Importantly, the initiative calls for the closing of the gender gap in the education sector by promoting the study of science, technology, engineering and mathematics by women and girls.

Advanced training of women and girls in these disciplines is seen as a critical step toward careers in clean energy innovation.

As primary users of electricity in everyday activities, most women are not sure where and how electricity is formed.

It is, therefore, important to engage them in the decision-making processes about energy.

It is envisaged that as the main users of energy and energy products, the C-3E programme would enable women to advance the energy saving techniques

by teaching their household members to adopt measures that save electricity consumption.

Some of the activities already being pursued in South Africa and other countries outside the SADC region to inspire women to participate in the programme include connecting young women with peers, mentors and role models in the renewable energy field; as well as provision of scholarships or internships to pursue clean-energy-related studies.

## Events Diary

### November

11-13, Qatar	Doha Carbon and Energy Forum 2013
12-13, UAE	Workshop on IRENA Global Renewable Energy Roadmap
13-14, South Africa	Southern African Energy Efficiency Convention and Exhibition
21-22, Switzerland	22 <sup>nd</sup> session of the UN Economic Commission for Europe's (UNECE) Committee for Sustainable Energy
25-29, South Africa	20 <sup>th</sup> Africa Oil Week
28-29, Ethiopia	Powering Africa

### December

4-6, Ethiopia	Rural Energy Access: A Nexus Approach to Sustainable Development and Poverty Eradication
6, Zimbabwe	Electricity and Power Development

### January

20-22, UAE	World Future Energy Summit 2014
27-29, South Africa	2 <sup>nd</sup> Southern African Solar Energy Conference

### February

18-20, South Africa	Africa Energy Indaba
26, Botswana	SADC Energy ICPs meeting
26-28, Botswana	Botswana Renewable Energy Expo
27, Botswana	SADC Energy Thematic Group meeting

### April

7-9, USA	Future of Energy Summit 2014
----------	------------------------------

