Energising the region for economic development

Southern African Power Pool

July 2015 Issue No. R07-15

REPORT

MONTHLY

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# Meetings, Workshops and Conferences

#### Attachment at SAPP under IS4D Project, Harare, Zimbabwe

From 20 to 24 July 2015, three learners in the Infrastructure Skills for Development (IS4D) Program funded by the Australian Government were attached to the SAPP Coordination Centre. They were from the Kenya Electric Power Company and were interested in learning about operations of the SAPP. One of the objectives of the program is to give attachés learning experience relevant to their work based projects.



The learners and their mentors at SAPP Coordination Centre in Harare

#### **Telecommunications Working Group**

The SAPP Telecommunications Working Group (TWG) held a meeting in Dar es salaam, Tanzania on the 9-10<sup>th</sup> of July 2015. The TWG completed commissioning the first phase of the terrestrial SAPP telecoms network. The three Control Areas (Eskom, ZESA and ZESCO) and SAPP CC can now communicate (both by voice and data) via the optic fibre linking Eskom, NamPower, ZESCO and ZESA. The remaining phases are commissioning the parallel route via



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ZESA and BPC in the central corridor and connecting all Operating Members.



TWG Members at the meeting.

# Transmission Pricing Task Team Meeting, Harare, Zimbabwe

From 7 to 10 July 2015 the SAPP Transmission Pricing Task Team met in Harare, Zimbabwe. They had a hands-on session on the functionality of the Transmission Pricing Model which was delivered by the consultant. Scenarios of the SAPP energy interchange transactions between utilities will be modelled to assess the financial impacts on utilities.



Members of the Transmission Pricing Task Team and the Consultant from Mercados

# Power Gen 2015 Africa, CTICC, Cape Town, South Africa

The Power-Gen Africa 2015 was held on 14-17 July 2015 in Cape Town South Africa. The conference covered a number of areas pertaining to power generation that includes financing the power sector, planning, transforming the power



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sector through electricity markets, policy regulation and privatisation, integration of renewable, power generation operation among others. Conference was attended by various experts in the power sector including members from the SAPP.

# SADC Energy Ministers Meeting, Johannesburg, South Africa

The SADC Senior Energy Officials and Energy Ministers meeting was held in Johannesburg, South Africa from 21 to 24 July 2014. Key issues on new projects developments including the move towards cost reflective tariffs were discussed among other things.

# EU MSC Workshop on Balancing Market Gap Analysis, Johannesburg, South Africa

A workshop on the gap analysis for the implementation of a balancing market in SAPP was held in Johannesburg, South Africa on 21-22 July 2015 for the SAPP Markets Sub Committee (MSC) members. The workshop looked at what a balancing market is including examples of balancing markets operating in Europe, what is required to implement a balancing market and the status of the SAPP and the gaps that need to be addressed for the implementation of a balancing market in SAPP. The workshop was sponsored by the EU and was attended by the SAPP MSC members.



MSC members during the workshop on Gap Analysis for the implementation of a Balancing Market in SAPP

## MSC - OSC Meetings on IDM and Energy Imbalance, Johannesburg, RSA

The Markets and Operating Sub-Committees met jointly from 23 to 24 July 2015 in Johannesburg. The meeting discussed the implementation of Intra-Day Electricity Market which is soon to be implemented in SAPP, review of rates for compensation of imbalance energy and the procedure for updating charges for providing Control Area Services and Regulating Reserves in SAPP.

# Crime Prevention Working Group Meeting, Blantyre, Malawi

A meeting of members of the Crime Prevention Working Group (CPWG) was convened in Lilongwe, Malawi on 30 to 31 July, 2015. The meeting managed to come up with a motivation paper for Harmonization of Legislation on Crime related to vandalism of utility infrastructure as well as a Standardised Operational Guidelines. A report from the meeting will be presented to the SAPP Management Committee during the semiannual meetings scheduled for September, 2015.

# PSC Workshop – Water and Energy Nexus in Zambezi Basin and SAPP, Cape Town, RSA

The SAPP Planning Sub Committee attended a workshop on water and energy nexus organised by the World Bank. The objective of the Workshop was to:

- Present results on how climate change could affect regional electricity supply, under various development scenarios, to inform national and regional project planning.
  - Train PSC members in how to utilise the integrated electricity and water modelling tools developed under project, to analyse their own alternative scenarios for the future (e.g. alternative climates, different roll out schedule for new power plants, alternative assumptions about GDP and population
- growth).

# African Development Bank Mission to the SAPP

The Department of NEPAD, Regional Integration and Trade (ONRI), undertook a mission to visit the Southern African Power Pool (SAPP), based in Harare, Zimbabwe, from July 15 to July 17, 2015. The mission was composed of Dr. Jacques MOULOT, Chief Energy Specialist, Ms. Elizabeth MUGUTI, senior power engineer (ONEC-2), Mr. Stephen DIHWA, Consultant, and Mr. Emmanuel NZABANITA, Head of the ZIM Fund.

The Terms of Reference(TORs) of the mission, highlighted the following objectives:

- Review and advise SAPP-Coordination Centre on issues related to the overall status, project coordination, supervision and reporting;
- Review and advise the Project Implementation Unit on issues related to disbursement and financial management, in order to accelerate disbursement;



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- Update the project implementation and disbursement schedule and quarterly targets;
- Discuss and develop solutions for accelerating the implementation of the projects in timely manner.

The mission met and worked with the following SAPP officials:

- Dr. Lawrence Musaba, Coordination Centre Manager, the SAPP Chief Engineer,
- Eng. Alison Chikova, and
- Mr. Johnson Maviya, Environmental Officer.

The SAPP presented an update with details on the status of the ZIZABONA project, the new proposed implementation strategy and the way forward with the existing power purchase agreements (PPAs).

The mission also looked at other SAPP priority projects that need assistance from the AfDB. Also under discussion were a number of projects to be considered for the period 2016 to 2020. These projects included

- Batoka Hydro-electric scheme (Zambia and Zimbabwe)
- Kudu gas (Namibia)
- Namibia- Angola Interconnector
- Central transmission Corridor (Zimbabwe and South Africa)
- Mozambique Zimbabwe and Zimbabwe-South Africa Transmission line (MOZISA), and
- HCB North Expansion (Mozambique)

Finally the mission discussed Capacity building requirements for the SAPP on ESIA where it was agreed that the SAPP could use the funding under the component Coordination and Supervision.

## Human Resources Working Group Meeting Harare, Zimbabwe

The Human Resources Working(HRWG) Group had a closed meeting from 30 to 31 July 2015. On the  $31^{st}$  of July the HRWG members then met the Southern African Power Pool Coordination Centre (SAPP – CC) staff updating each one of



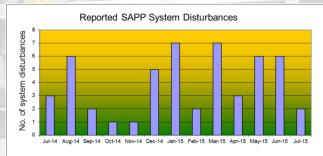
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the new policy on employment contract renewal process.

# System Operations

#### **System Disturbances**

Two system disturbances were reported on the SAPP interconnected power system in the month of July 2015. The first one occurred around 18:00hrs during peak. The power system frequency gradually dropped to 49.60Hz due to shortage of generation. The under-frequency state triggered tripping of the bus coupler circuit breaker at Songo in Mozambique which resulted in loss of about 230MW on the Mozambique -South Africa HVDC link. The second system disturbance occurred in the Copperbelt Area in Zambia, A 66kV circuit breaker failed and resulted in a bus bar fault at a major substation. Load was lost due to tripping of transmission equipment and the load was rejected southwards into Zimbabwe. The 220kV Zambia - DR Congo tie line also tripped because of this fault. Figure below shows the general outlook of reported SAPP system disturbances.



Reported SAPP System Disturbances



# **Update on SAPP Projects**

#### Zimbabwe – Zambia- Botswana –Namibia (ZIZABONA) Transmission Project

The Transaction Advisor (TA) for the project has completed the following reports:

- Market and Load Flow Studies
- Engineering Procurement and Construction(EPC) contracting strategy report
- Lender's engagement report
- Draft of Phase 1 Wheeling Agreement

ZIZABONA Project members will meet with the TA in August, 2015 to discuss the reports and proceed with signing of the Shareholders Agreement (SHA) that will enable the setting up of the project Special Purpose Vehicle (SPV). Meanwhile the consultant for the Environmental and Social Impact Assessment (ESIA) for the line route in Zambia is expected to conclude the study and submit the final report to the Zambia Environmental Management Agency (ZEMA) for approval in September, 2015.

#### Mozambique – Zimbabwe-South Africa (MOZISA) Inter-connector Project

A workshop for the MOZIA Members was held on 30 July 2015 in Johannesburg, South Africa. The objective of the workshop was to discuss the technical report which outlined the technical inputs that would be used in the transmission system studies.

# Central Transmission Corridor (CTC) Project

The selection of consultants to undertake detailed feasibility studies for the three transmission lines is currently underway. The three transmission lines for the project are:

- Bindura- Mutorashanga line
- Alaska- Sherwood line
- Orange Grove Triangle line

All the three lines are located in Zimbabwe. The objective of the project is to strengthen the Central Transmission Corridor that will result in



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the removal of existing transmission constraints in Zimbabwe.

# **Electricity Trading**

## Energy Traded

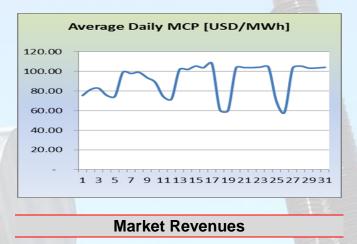
July 2015 saw the highest traded volumes being recorded in a single month since the market started. With regards to bids submitted, there were more buy bids than sale offers received in July 2015 in the day ahead market trading platform. A total of 111,744 MWh Sale offers and a total of 490,258 MWh Buy bids were received in July 2015. There was an increase of 16,545 MWh or 17% in Sale offers received and an increase of 228,931 MWh or 88% in Buy bids received in July 2015 when compared to June 2015 figures of 95,199 MWh Sale offers and 261,327 MWh Buy bids received.

Total traded volumes on DAM and PDAM was 94,031.50 MWhr. Of this, 90% or 84,788.80 MWhr was traded on DAM while 9,243.20 MWh or 10% was traded in PDAM. PDAM increased by 1,606.40MWh or 21% in July 2015 when compared to June 2015 where 7,636.80 MWh was traded in PDAM. On the other hand DAM traded volume increased by 23,896.90 MWhr or 39% from the 60,891.90MWhr recorded in June 2015.

# **Market Clearing Prices**

Prices were steady on the market for most of the days during the month of July 2015. The average monthly market clearing price (MCP) rose sharply during the month of July 2015 to 9.112 USc/KWhr when compared to the 7.446 USc/KWhr recorded in June 2015. MCP prices have been averaging around 7.000 USc/KWhr in the previous months. Below is a summary of the daily average MCPs for the month of July 2015.





A total of USD 7,104,712.74 was exchanged on the DAM and PDAM markets during the month of July 2015 when compared to a total of USD 4,769,203.90 exchanged in June 2015. The increase is mainly attributed to the increase in traded volumes and market clearing prices recorded in the month of July 2015 when compared to June 2015.

# **Environmental Corner**

## PCB Phase-out in the SAPP Region

Following a meeting on Regional PCB Phase-out project that was held in Harare in June, 2015 between the Africa Institute on PCBs and SAPP-CC, Africa Institute dispatched a team to visit utilities and collect missing PCB quantities at various so that the information can be submitted to the UNEP in by August, 2015.

#### Environmental Risk Assessment

The Environmental Sub-Committee is in the process of crafting an Environmental Risk Assessment for the SAPP region. A draft Risk Management paper has been produced and will be finalised during the SAPP Semi-annual meetings in September, 2015.

# **Upcoming Events**

	DATE	EVENT
	4-6 Aug	SAPP – MTP FAT Tests Meeting,
	2015	Johannesburg, South Africa
	13-14 Aug	SAPP CC Constitution Review,
	2015	Harare, Zimbabwe
	17 – 18	ZIZABONA Meetings,
ĺ	August, 2015	Johannesburg, South Africa
ŧ	20 Aug	Joint PSC/MSC Meeting on
ř.	2015	Transmission Pricing, Harare,
		Zimbabwe
	31 Aug – 4	45th SAPP Management Committee
	Sept 2015	Meetings, Gaborone, <b>Botswana</b>
1	1 - 2 Sept	The Infrastructure Africa 2015,
	2015	Sandton Convention Centre, <b>South</b> Africa
	15 Sept	ICP/ETG meeting, Gaborone,
_	2015	Botswana
2	13 -15 Oct	Traders and controllers Forum,
	2015	Lubumbashi, DR Congo
	30 October	39th SAPP Executive Committee
	2015	Meeting, 20 <sup>th</sup> SAPP Anniversary
1		Celebrations, Lusaka, Zambia
	26-30 Oct	CIGRE Symposium, Cape town,
	2015	South Africa



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