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Meetings, Workshops and Conferences

SAPP Executive Committee Meeting

The 44th SAPP Executive Committee Meetings took place in Ezulwini, Swaziland on 22 March 2018 and were officially opened by Honourable

Minister of Energy and Natural Resources, Honourable Jabulile Mashwama.



44th SAPP Executive Committee Meeting Official Opening Ceremony

The SAPP Executive Committee meeting was preceded by the SAPP Executive Committee Strategic Workshop where the Executive Committee addressed key strategic issues for SAPP.

Annual Africa Power Round Table

The SAPP PAU met with potential investors, DFI's, donors, and stakeholders at the investor roundtable held in Johannesburg and highlighted the status of projects and the work that SAPP is doing in project development. Some DFI's expressed interest in participating in projects.

Transmission and Distribution Investments Workshop

The SAPP Chief Engineer attended a workshop on "Alignment of Electricity Transmission and Distribution (T&D) Investment with a 2-Degree Pathway", which was sponsored and hosted by the World Resources Institute (WRI). The workshop took place in Washington DC, USA.

The purpose of the workshop was to bring together technical experts from across the globe who reviewed and gathered feedback on a draft methodology and discussed what alignment of



T&D investments means in the context of climate change mitigation.

System Planning

SAPP Pool Plan Study

The Consultant presented the final report on the SAPP Pool Plan Study to the SAPP Executive Committee. The SAPP Executive Committee recommended that the SAPP Pool Plan be presented to the SADC Energy Ministers for approval.

SAPP EAPP Transmission Integration Study

The updated draft report was delivered by the Consultant. The SAPP and EAPP continued to verify the data and the models for the SAPP EAPP Transmission Integration Study. The next step would be the presentation of the draft report to the Markets and Operating Sub Committees of both Pools followed by the development of the keys recommendations.

SAPP Project Development Readiness Assessments

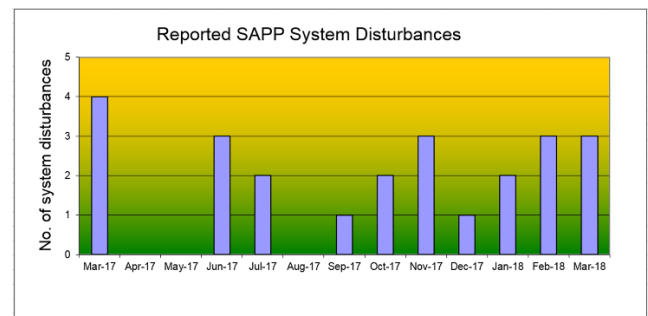
The SAPP is using the Project Development Readiness Assessment (PDRA) Tool to evaluate the status of generation and transmission projects. The tool assists in identifying gaps and risks that may arise in project preparation and implementation. A schedule was developed to undertake the project evaluation for all utilities.

System Operations

System Disturbances

Three SAPP system disturbances were reported in the month of March 2018. The first one was a low frequency excursion incident in which system frequency dropped from 49.894 Hz to 49.479 Hz

at worst point when one generator in South Africa tripped while generating 720 MW due to a faulty auxiliary system. The second one was a high frequency excursion incident where system frequency rose from 50.08 Hz to 50.52 Hz at worst point when a load of about 1200 MW tripped in South Africa due to a faulty bus coupler circuit breaker. The last one affected the Zambia - Namibia interconnection when a fire out-break in the Gerus HVDC valve hall led to tripping of the Zambezi HVDC link. The Figure below shows the general outlook of reported SAPP system disturbances since March 2017.



Reported SAPP System Disturbances

Equipment Outage

Various maintenance works on equipment and auxiliary systems were carried out during the month without affecting energy interchange among members. On the 400 kV Matimba (South Africa) - Phokoje (Botswana) tie line, live-line maintenance was carried out. On the generation side, Hwange generator no. 2 (in Zimbabwe) was taken out of service for annual maintenance. Morupule B generator no. 3 (in Botswana) was also taken out for annual maintenance. Kariba North generator no. 1 (in Zambia) was still out of service for runner upgrade and maintenance of the generator transformer.

Electricity Trading

Market Participation

There were eleven (11) active portfolios from eight (8) members in DAM during the month of March 2018. There was a slight change when compared



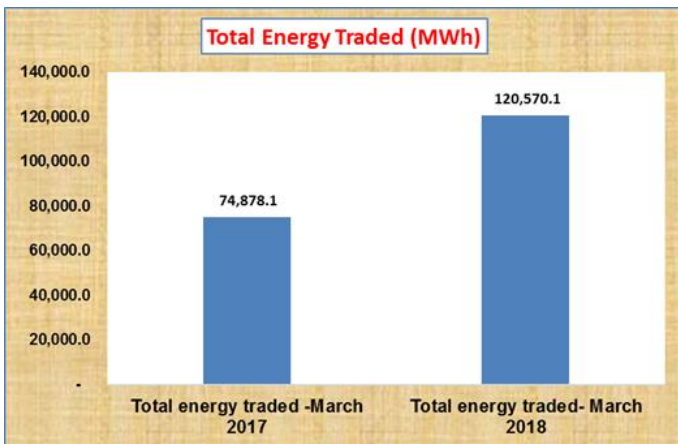
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to the month of February 2018 in which there were ten (10) active portfolios from eight (8) Members.

Energy Traded

Trading in the market was significantly higher during the month of March 2018 when compared to the same period in March 2017. Total traded volumes on the Day Ahead market (DAM), intra-day market (IDM), Forward Physical Market Monthly (FPM-M) and Forward Physical Market Weekly (FPM-W) increased by **61% to 120,570.10MWh** in the month of March 2018 as to compared to the same period in March 2017 where traded volume was 74,878.1 Wh. Below is the overview of volumes traded in DAM, IDM, FPM-M and FPM-W for the month of March 2018 in comparison to same period in March 2017.



Traded Volumes in MWh in DAM, IDM, FPM-W and FPM-M for the month of March 2017 and March 2018

Market Clearing Prices

FPM Monthly Prices

Non off-peak prices increased by 3.7% from 6.23USc/KWh in February 2018 to 6.460USc/KWh in March 2018. Off Peak prices decreased by 2.5% from 3.340USc/KWh in February to 3.255USc/KWh in March 2018.

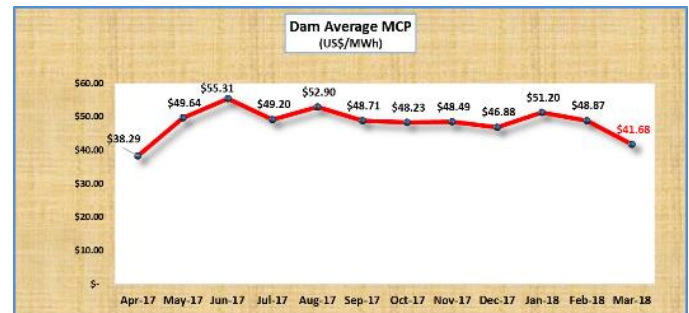
FPM Weekly Prices

The average price for the peak period was lower by 4.6% at 8.78USc/KWh in March 2018 from the February 2018 average peak price of

9.20USc/KWh. Standard period average prices decreased from the February 2018 average price of 6.7USc/KWh to 6.3USc/KWh in March 2018. The average Off-Peak price also decreased by 3.5% from 3.15USc/KWh in February 2018 to 3.04USc/KWh in March 2018.

Day Ahead Market

The monthly average Day Ahead market-clearing price (MCP) was slightly lower during the month of March 2018 at 4.168USc/KWh when compared to the 4.889USc/KWh recorded in February 2018.



Daily Average MCP prices April 2017 to March 2018.

Intra Day Ahead Market (IDM)

The average peak spot price for the IDM for the month of March 2018 was 6.971USc/KWh from the February 2018 average of 7.538 USc/KWh. The average standard spot price increased from 4.546 USc/KWh in February 2018 to 4.627 USc/KWh in March 2018. The average off-peak spot price marginally decreased from 2.768USc/KWh in February 2018 to 2.761USc/KWh in March 2018.

Market Revenues

A total of **USD5,825,031.01** was exchanged on the DAM, IDM, FPM-W and FPM-M market during the month of March 2018 when compared to a total of **USD4,885,550.68** exchanged in February 2018. The change is mainly attributed to changes in traded volumes.



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Update on SAPP Projects

Mozambique – Zambia Interconnector

The draft inception report was completed and is being reviewed by the stakeholders. On the environmental studies, the site visits have been completed and data collection is on-going. The inception report was also completed. The workshop for the presentation of the technical and environmental reports to stakeholders is being planned for mid-May 2018. The following timeline is being followed:

- Financial and Legal Workshop – June 2018
- Preliminary Feasibility Report - September 2018
- Final Feasibility Report - May 2019
- Final Report - September 2019

Kolwezi – Solwezi Transmission line Project

Data collection has been completed. The environmental consultant is still to be appointed but awaits approval by the AfDB to proceed. The following timeline is being followed:

- Inception Report – April 2018
- Preliminary Feasibility Report - September 2018
- Final Feasibility Report - May 2019
- Final Design Report - September 2019

Luapula Hydro Electric Scheme

This is a cascading hydroelectric scheme between DRC and Zambia on the Luapula River.

Risk management training and the hydrology training was conducted by the consultants during the month.

The following timeline is being followed:

- Financial and Legal Workshop – June 2018
- Options Assessment Report – June 2018
- Draft Feasibility Report - August 2018
- Final Feasibility Report - October 2018

Mozambique – Malawi Interconnector

An independent advisor was procured by SAPP to assist ESCOM, Malawi on power purchase agreements and wheeling arrangements. This has assisted in unpacking the risks and mitigations in these agreements. Three reports were submitted to ESCOM during the month.

Botswana – South Africa Interconnector

Work on the preparation of commercial structures was completed for the business case of this project.

The preliminary design is underway. The project has been delayed due to ESIA processes in the 2 countries.

Angola - Namibia Interconnector

A Meeting was held on 27 March in South Africa at which the Scoping Report was approved. The time lines for Part 2 of the studies which includes the Feasibility Studies were agreed. The final Feasibility Study Report is expected to be submitted in July 2019.

Zimbabwe - Zambia – Botswana - Namibia (ZIZABONA) Interconnector

On the next steps, the SAPP is currently engaged with ZESCO to work with the Ministry of Finance in Zambia for the request for funding. DFI's and donors will respond to the official request. Some donors will start engaging on due diligence activities in May 2018.

Environmental Corner

Earth Hour 2018

On Saturday, 24 March 2018, SAPP member states joined the rest of the world when they switched off their lights to celebrate the Earth Hour from 20:30 to 21:30 together saving over 420 MW.



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Earth Hour is a global call for the protection of the planet and for people to take a stand against climate change. Each year on the last Saturday in March, SAPP join thousands of people around the globe and use their collective voice to inspire, motivate and lead the charge on their hopes, dreams and concerns about the planet.

The SAPP encourages people to take action beyond this one hour and to make energy efficiency and environmental conservation part of their daily lifestyles.



Swaziland Electricity Company staff commemorates Earth Hour 2018

PCB Phase-out in the SAPP Region

The SAPP-CC in consultation with SAPP utilities are developing strategies of utilising USD 150 000 to be availed from the Global Environmental Fund through the Africa Institute for PCB awareness strategies. The same organisation also availed USD 120 000 for National Operator training management on in-use transformers. The target is to train 60 responsible persons at each utility on PCB Management.

Environmental Days - April

Countries of the world will be celebrating the Earth Day on 22 April, 2018. This is an event that is celebrated annually, where nations demonstrate support for environmental

protection. This year's theme for the day is "to help end plastic pollution"

Upcoming Events

DATE	EVENT
11 April 2018	SADC Energy Thematic Group Meeting, Gaborone, Botswana
11-12 April 2018	SAPP Human Resources Working Group Meeting, Gaborone, Botswana
24 – 27 April 2018	APUA Scientific Committee and Power Pool Meetings, Addis Ababa, Ethiopia
3 – 4 May 2018	SAPP OSC and MSC Workshop on SAPP EAPP Integration in Pretoria, South Africa
7 – 11 May 2018	SADC Technical Experts and Senior Officials Meeting, Johannesburg, South Africa
15 -17 May 2018	Africa Utility Week, Cape Town, South Africa
22 - 24 May 2018	SAPP Transmission Pricing Task Team Meeting, Harare, Zimbabwe
June 2018	Quality of Supply Working Group Meeting, Maputo, Mozambique
19 - 22 June 2018	Africa Energy Forum, Mauritius
26 - 29 June 2018	IEEE PES- IAS Power Africa Conference 2018, Cape Town, South Africa
Sept 2018	51st SAPP Management Committee Meetings, Tanzania
Oct 2018	45th SAPP Executive Committee Meetings, Zimbabwe



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