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Meetings, Workshops and Conferences

Africa Investment Forum

The SAPP PAU Programs Manager, The SAPP Chief Engineer (Planning and Operations), and the SAPP Chief Engineer (Markets) attended the Africa Investment Forum held in Marrakech, Morocco. A presentation was done on the SAPP priority projects.

G-PST Workshop: Establishing an ISO-Regulatory and Legal Frameworks

The SAPP and the Global Power System Transformation Consortium (G-PST) arranged a virtual workshop on Regulatory and Legal Frameworks. The workshop explored Independent System Operators (ISOs) and their regulatory regimes. It also covered ISO's legal frameworks, understanding the role of regulatory agencies, and emphasizing transparency and independence as key regulatory principles. It also covered the complexities of unbundling, uniform accounting, and ring-fencing or separation in line with regulatory requirements. The workshop was attended by SAPP and SADC regulatory agencies.

AfDB Mission to SAPP

The African Development Bank visited the Southern African Power Pool (SAPP) for an appraisal mission for the SAPP Energy Storage Strategy Project under the Strategic Alliance for Energy Transition (SAET) Initiative with the Fund for African Private Sector Assistance (FAPA). The mission at SAPP took place from 29 to 30 November 2023.

IEEE Power Africa Conference (PAC2023)

The 2023 IEEE PES/IAS Power Africa Conference (PAC) was held in Marrakech, Morocco, under the theme “Convergence of national and off-grid systems”. Professional engineers, academics, researchers, students, entrepreneurs in the IEEE Smart Village programme, and business people re-connected in-person. The conference programme included technical paper presentations, tutorials about power system protection, efficient lighting, and energy storage technologies, and a technical visit to



solar power technologies laboratory. SAPP Coordination Centre, represented by the Operations Engineer, participated in the panel session on the role of power pools in the electrification of the African continent for socio-economic development and transitioning into clean energy. Next year's IEEE PAC will be held in Johannesburg, South Africa.



Panelists of the African Power Pools Panel at IEEE PAC2023

20th SAPP Annual Traders and Controllers Forum

The 20th SAPP Annual Energy Traders and System Controllers Forum was held in Maseru, Lesotho, from 16 to 17 November 2023. Participants discussed various issues on energy trading and system control and operations and made specific recommendations to the Markets and Operating Sub-Committees. Participants also visited a 30 MW solar power plant in Maseru.



Some of the participants at the 20th SAPP traders and controllers forum

System Planning

G-PST Workshop: Establishing an ISO-Planning and Operations

The SAPP and the Global Power System Transformation Consortium (G-PST) arranged a virtual workshop on Planning and Operations. It explored the vital role of Independent System Operators (ISOs) and covered into topics such as operating reserves, the intricacies of long-term, medium-term, and short-term planning processes, as well as the cutting-edge technology of SCADA systems for real-time power system supervision. The workshop was attended by SAPP Planning Sub Committee members.

Update on SAPP Projects

In the month under review, the SAPP Projects Advisory Unit (PAU) participated in the Botswana Roadshow, from 31 October to 3 November 2023, where the SAPP Project Portfolio and services rendered by the PAU were showcased to energy stakeholders in Botswana. The stakeholders comprised the Botswana Power Corporation (BPC), Ministry of Energy, Botswana, Independent Power Producers, and the Botswana Energy Regulator.

The PAU also arranged three Management Committee meetings for the ZIZABONA Project on 14 November 2023, the ANNA Project on 21 November 2023, the Baynes Transmission lines Project on 23 November 2023.

ANNA Transmission Interconnector Project

In the month under review, the PAU held several meetings with stakeholders to discuss project status. Meetings were held with sponsors, DBSA, and the World Bank to facilitate forward planning of project events.



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On 17 November 2023, the PAU held a bilateral meeting with the DBSA to update them on new developments on the project, regarding a request by the Transaction Advisor's intentions to pause implementation of remaining project activities, until firm confirmation on project financing agreement between the Government of Angola/RNT and the World Bank, for financial close and procurement of an Engineering, Procurement and Construction (EPC) Contractor for the Angola transmission corridor.

On 21 November 2023, the PAU chaired the ANNA MANCO meeting, that discussed in detail the project status as follows:

- (i) Progress report by Angola/RNT on finalisation of a project financing facility with the World Bank, to guarantee financial close and procurement of an EPC contractor.
- (ii) World Bank letter on the commitment to support development of the Angola transmission corridor.
- (iii) SADC-PPDF/DBSA commitment to the project beyond 31 March 2024 when the Facility Agreement (FA) with SAPP expires. The FA is currently funding implementation of project transaction advisory services being undertaken by the Consultant.

Baynes Hydro-Power Plant Project

Following commencement of the Baynes HPP transmission lines project preparation activities on 20 July 2023, ZUTARI the technical feasibility study consultant has been working to propose a draft Inception report. On 29 September 2023, the Consultant submitted a draft Inception report to stakeholders for review and comment on their proposed planning and project implementation methodology. All stakeholders received the draft Inception report, reviewed, and provided comments to

the draft report on 13 October 2023. The Consultant has since updated report and submitted a draft final Inception report to stakeholders on 6 November 2023.

Technical Feasibility Study:

The first Baynes HPP transmission lines project MANCO meeting was held on 23 November 2023, to review and finalise on the draft final Inception report. The meeting approved the report and requested the Consultant to submit a Final Inception report and invoicing for reimbursement of implementation costs.

Luapula Hydropower Plant Project

Following news of funding support to the Project from the Multilateral Cooperation Centre for Development Finance (MCDF), the PAU coordinated for the final review and update of Technical Feasibility study and ESIA study Terms of Reference (ToRs).

Technical Feasibility Study:

Draft technical feasibility study ToRs that were shared with sponsors, on 25 October 2023, have been received in updated format. SNEL and ZESCO submitted revised ToRs on 3 November 2023.

Botswana Renewable Energy Project

In the month under review, the feasibility study contract between SAPP and Tractebel was amended on 2 November 2023 and extended to 29 February 2024, to ensure completion of ongoing deliverables across the four Renewable Energy technologies.

The following are preliminary outputs delivered in the month under review:

- (i) Draft Interconnection approach report.
- (ii) Draft BESS assumptions report.
- (iii) Draft final PV-Solar, Wind and CSP feasibility study reports.



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It is expected that the final reports will be delivered once all stakeholders have submitted reviews and updates by early December 2023.

ZIZABONA Transmission Interconnector

On 14 November 2023, the PAU called for a MANCO meeting to receive and comment on findings of the Meridiam funded gap analysis review on the 2017 ZIZABONA Technical Feasibility study report and ESIA and RAF reports. The meeting also received updates on the work being done by the GGIA, regarding a regional wide energy market analysis study.

Regional Transmission Infrastructure Financing Facility (RTIFF)

The SAPP is now preparing the governance processes required to bring the potential Fund Manager on board. These include the utilization of the establishment budget, interim agreement sign off and adoption of members to the steering committee.

System Operations

SAPP System Disturbances

In the month of November 2023, four (4) SAPP system disturbances were reported. In the first one, a generation unit tripped from 449 MW in South Africa and power frequency temporarily dropped from 49.874 Hz to 49.449 Hz. In the second one, generation decreased from one unit in South Africa during level 3 load-shedding and led to the temporal fall of power frequency from 49.794 Hz to 49.4 Hz. In the third one, power frequency temporarily fell from 49.68 Hz to 49.45 Hz due to load shedding activities in South Africa. In the fourth disturbance, a generation unit tripped from 693 MW in South Africa and power frequency dropped from 49.874 Hz to 49.947 Hz. In all these disturbances power frequency was controlled back to the normal operational

band by action of generator governors, instantaneous demand response, and changing modes of pumped storage generation units. Refer to figure below for the outlook of reported system disturbances.

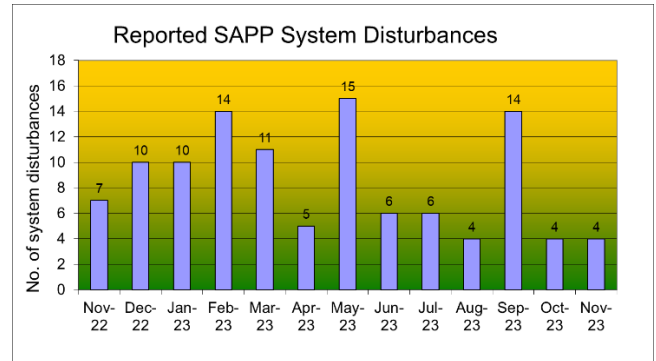
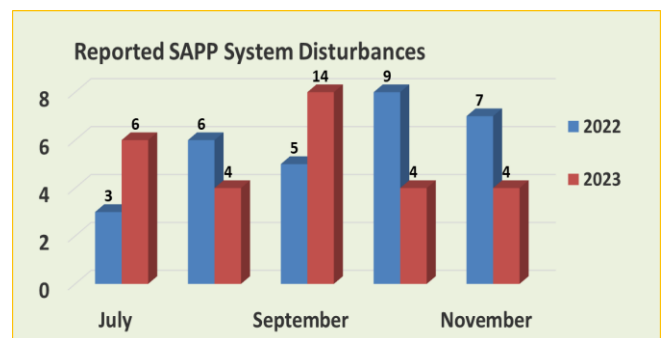


Figure below gives a comparison of the reported disturbances between this year and the previous year.



Power Supply – Demand Situation

The table below shows the power supply and demand situation in November 2023 in SAPP member utilities.

Country, Utility	Available (MW)	Recorded Peak Demand (MW) ¹	Load Shed (MW)
South Africa, Eskom	26229	26056	400
Botswana, BPC	597	629	-
Eswatini, EEC	71	489.5	-
Mozambique, EDM and HCB	2246	960	-
Namibia, NamPower	489.5	620	-



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Zambia, ZESCO, CEC	3462.8	2328	-
Zimbabwe, ZESA	2506	1822	-
Lesotho, LEC	104	167	-
DR Congo, SNEL ²	1808	1976	-

Notes: ¹Recorded peak demand – after load shedding
²Estimated figures

Electricity Trading

Traded Volumes

Total traded volumes in all the markets (Forward Physical Monthly Market (FPM-M), Forward Physical Weekly Market (FPM-W), Day-Ahead Market (DAM), Intra-Day Market (IDM), and the Balancing Market (BM)), decreased by 49% to 37.1 GWh in November 2023, from the October 2023 volume of 73.4 GWh.

Market Energy Prices

The monthly average DAM market clearing price (MCP) for November 2023 was 20.8 USc/kWh. This was a 32% increase when compared to the October 2023 market clearing price of 15.7 USc/kWh.

Market Revenues

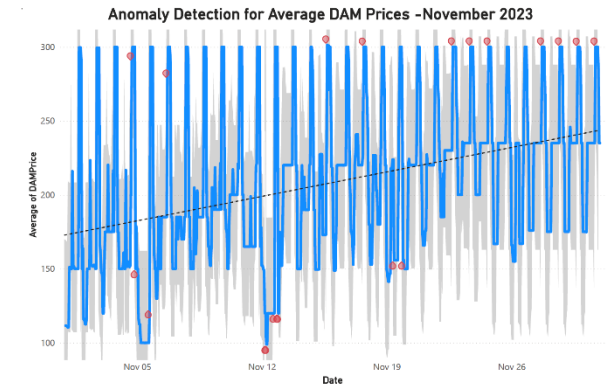
A total revenue of USD 7.5 million was exchanged on the competitive market during November 2023 compared to USD 10 million exchanged in October 2023. The change is mainly attributed to the drop in volumes even though there were increases in prices. USD 16.7 million was exchanged on the competitive market during the same month of November in 2022.

Market Surveillance

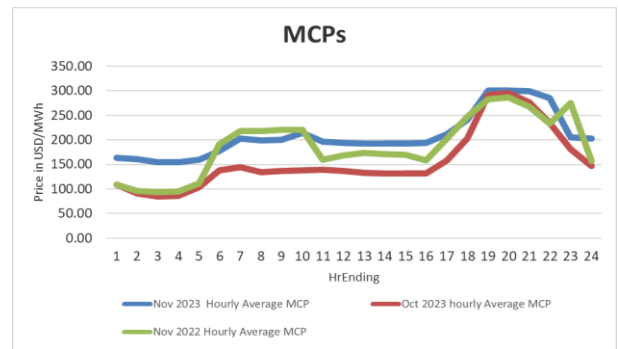
Market Monitoring & Surveillance

During the period under review, the MS Unit observed anomalies in DAM clearing prices, and on analysis it was reviewed that these did not arise due to market manipulation but were

caused by the interplay between market supply and demand.

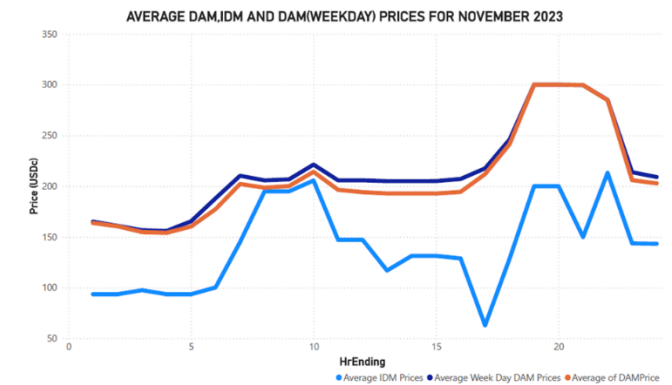


Average DAM Clearing Prices for November 2022, October 2023, and November 2023



The average hourly DAM clearing prices for November 2023 were higher than those of October 2023 and November 2022 especially during the morning off-peak and standard hours.

Average Hourly IDM and DAM Prices for October 2023



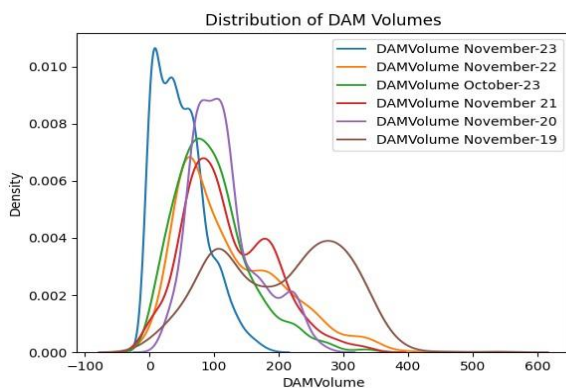
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For the period under review, the average weekday DAM prices were in the same range as the average hourly DAM prices, especially during the evening peak. The IDM prices were generally lower than the average hourly DAM prices, for all hours of the day.

Market Volumes

Utilities participated in the DAM, and IDM. The quantities traded did not raise any form of suspicion thus did not warrant any investigations.



The DAM Volumes traded during the month under review were low compared to the same time the previous years.

There were some major generator and transmission outages during the month under review. The Market Operator observed its own processes and procedures.

The MTP system generally performed according to expectations during the month of November 2023. There were no cases of market abuse recorded during the month of November 2023.

Environmental Corner

Polychlorinated Biphenyls (PCB) SOP and Awareness

SAPP PCB SOP and Awareness materials development project registered significant progress during the period under review. The Environmental Subcommittee including representatives from the Island states (Madagascar, Seychelles, and Mauritius), and Africa Institute working together with the consultant undertook a PCB draft SOPs review exercise. An interactive approach was used in which the consultant presented six SOPs developed, ranging from PCB handling and storage right up to the disposal phase. Stakeholders in the review workshop then made comments and suggestions for improvement on the developed materials to ensure that needs and expectations are satisfied. The consultant finally incorporated comments raised and shared the finalized drafts. Outstanding deliverables include development and circulation of draft training materials based on the identified capacity building needs as well as delivery of a virtual awareness workshop.

Green Climate Fund Workshop

The Green Climate Fund Workshop was held virtually on the 16th of November 2023 courtesy of E-Co consulting group. SAPP participated through the environmental subcommittee. The purpose of the workshop was to provide an opportunity for an in-depth discussion on the GCF Board's decisions that are shaping the future of the world's largest climate fund.

In this workshop, participants got a chance to gain an understanding of the GCF's current strategy. The following aspects were covered during the interactive sessions:



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Key issues emerging from GCF 37th Board Meeting, based on outcomes from Tbilisi, Georgia;

- Common challenges amongst stakeholders, based on the 24th GCF insight;
- How the GCF is evolving within the climate finance space;
- Influencing trends in the world of climate finance;
- Capacity-building, replenishment, private sector investment among others.

Upcoming Events

DATE	EVENT
30 Nov – 12 Dec 2023	UNFCCC (COP 28), Dubai, UAE
11 Dec 2023	57 th SAPP CC Board Meeting, Harare, Zimbabwe
12-13 Dec 2023	SAPP Telecommunications Working Group Meeting, Livingstone, and site-visit to ZESCO Cyber Security Centre in Lusaka, Zambia .
19 - 22 Dec 2023	EAPP Visit to SAPP, Harare, Zimbabwe
January 2024	Energy Stakeholders Engagement and SAPP Roadshow, Maseru, Lesotho
31 Jan – 1 Feb 2024	5 th Tanzania Energy Cooperation Summit, Arusha, Tanzania
5 - 6 Feb 2024	Market Surveillance Exchange Visit to FERC, USA
5 - 9 Feb 2024	Southern Africa Regional Carbon Pricing Workshop, Johannesburg, South Africa
23-24 Jan 2024	SAPP Protection System Coordination Task Team Meeting, Johannesburg, South Africa
Feb 2024	62 nd SAPP Management Committee Meetings, Eswatini
4 - 8 March 2024 TBC	SADC Energy Sub Committee Meeting, Luanda, Angola
18 - 20 March 2024	The Future Energy Show Africa Conference, Johannesburg, South Africa
March 2024	56 th SAPP Executive Committee Meeting
April 2024	International Association for Impact Assessment Conference, Ireland
30 April – 3 May 2024	PLEXOS User Group Meeting 2024

24-30 May 2024	Enlit Africa Conference on Power, Energy and Water, Cape Town, South Africa
May 2024	SADC Energy Ministers Meeting, Luanda, Angola
August 2024	Traders and Controllers Certification Training
25 - 30 Aug 2024	2024 CIGRE Session, Paris, France
Sept 2024	63 rd SAPP Management Committee Meetings
October 2024	IEEE Power Africa (PAC2024) Conference, Johannesburg, South Africa
Oct 2024	57 th SAPP Executive Committee Meeting
Nov 2024	Traders and Controllers Forum, Tanzania



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