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Meetings, Workshops and Conferences

Tanzania Energy Cooperation Summit

The SAPP Chief Engineer (Planning and Operations) attended the Energy Corporation Summit in Arusha, Tanzania. He participated in a panel session on building a regional interconnection focussing on the following:

- The regional energy trade map outlook
- Progress on Tanzania-Zambia-Kenya, Tanzania-Mozambique, Tanzania-Uganda Interconnectors and how these interconnectors support the growth of a regional energy hub.

- The roadmap for SAPP and EAPP transmission integration
- Financing models for transmission projects
- What regulatory frameworks could support regional interconnection

SAPP Strategic Planning Workshop

The SAPP Management team had a strategic planning workshop focusing on defining the key focus areas for 2024/25 financial year in Ezulwini, Eswatini from 22 to 25 January 2024.

System Planning

Transmission Pricing Model Review

The SAPP is continuing with the testing of a new transmission pricing model. During the period under review the SAPP CC and the Transmission Pricing Task Team Chairperson continued with the engagement of SAPP members on the familiarisation of the operations of the transmission pricing model.

The model results and new proposed tariffs will be presented to the joint Planning Sub-Committee, Operations Sub-Committee and Market Sub-Committee meetings scheduled to take place on 12th March 2024 in Ezulwini, Eswatini. Recommendations from the joint sub-committee will be presented to the Management Committee on 14th March 2024.

African Continental Master Plan

The development of the continental power system masterplan is still in progress. The SAPP as a major stakeholder has continued to give technical support during the period under review and the activities that occurred were as follows:



- (i) Delivery of CMP “Bridge Phase” Final Inception report.
- (ii) Delivery of deliverable 2: Transmission Network Scenario Studies.
- (iii) Delivery of deliverable 3: Multiple Energy Project Prioritisation Criteria.

The main objective of the Bridge assignment is related to the endorsement of the CMP by AU Heads of State and the development of the CMP priority investment projects and investment prospectus.

Upcoming activities includes the joint hybrid stakeholder consultation meetings scheduled for 21st to 22nd February 2024 in Addis Ababa, Ethiopia. The main objective for the consultation meeting, is to discuss and agree with AU Stakeholders on AfSEM’s, CMP’s, and AfEES’s bridge phase outcomes and synergies as well as validating the deliverables.

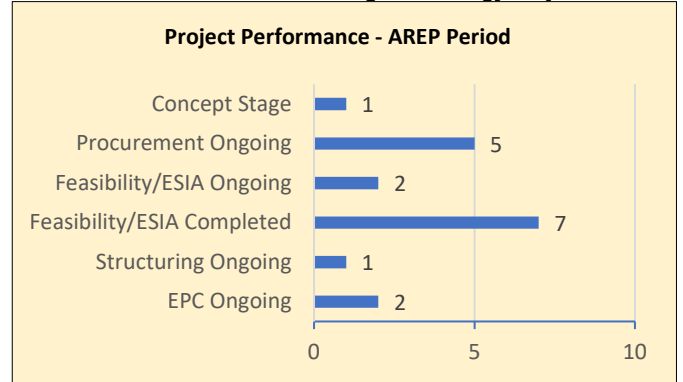
Update on SAPP Projects

In the month under review, the SAPP Project Advisory Unit (PAU) managed ten regional energy projects. The tables below give indications of the stages of various projects that are being coordinated.

Table 1: SAPP Regional Energy Projects (FY2024-FY2030)

No.	Project Name	Status	Sponsor Utility
P1	ANNA Transmission Interconnector	Structuring	RNT/Nampower
P2	Baynes HPP Transmission Lines	FS/ESIA Stdy	RNT/Nampower
P3	Baynes - Tombwa Transmission Line	Procurement	RNT
P4	Inga-Soyo Transmission Interconnector	Procurement	RNT/SNEL
P5	Luapula HPP & Transmission Lines	Procurement	SNEL/ZESCO
P6	Malawi-Zambia Transmission Interconnector	FS/ESIA stdy	ESCOM/ZESCO
P7	Mozambique-Zambia Transmission Interconnector	Procurement	EDM/ZESCO
P8	Mozambique-Tanzania Interconnector	Procurement	EDM/TANESCO
P9	Mozambique-Zimbabwe Transmission Interconnector	Concept	EDM/ZESA

Table 2: Cumulative SAPP Regional Energy Projects



ANNA Transmission Interconnector

Transaction Advisory Services:

On 11 January 2024, the Transaction Advisor structuring the project formally applied to extend the project timeline to March 2025. On 18 January 2024, SAPP therefore applied for an extension of the Facility Agreement with the DBSA and requested permission to extend the Service Level Agreement (Contract) with Transaction Advisor. The proposed extension has been motivated by the following:

- (i) Delayed mobilisation of project financing for the procurement of an EPC contractor, for the Angola section.
- (ii) Additional ESIA scope of work requested by the World Bank to undertake a Stakeholder Engagement Plan (SEP) and identification of Indigenous people in the project area on the Angola side.

Baynes Hydro Transmission Lines

As of 31 January 2024, the project was at 15% implementation progress. The following is a summary of progress towards the draft Preliminary study and the ESIA scoping reports:

Technical Feasibility Study:

- Data Collection: Preliminary planning information was received.



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- **Integration Options:** Based on current understanding, preliminary integration concepts and options were identified and discussed at various workshops.
- **Site/Corridor selection:** Available spatial data was used to identify conceptual transmission corridors. These were discussed with the recently appointed ESIA consultant.
- **Regional Market Analysis:** Country demand and generation profile analysis and review was conducted. A preliminary Market Model approach has since been developed.

Independent Panel of Experts (IPOE):

In the month under review, the PAU procurement team finalised contract arrangements with selected experts, proposed for the Baynes Hydro Power Plant assignment.

Baynes - Tombwa Transmission Project

In the month under review, the PAU updated ESIA study Terms of Reference (ToRs).

The project is an intra-country transmission intervention in Angola, for the connection of Tombwa municipality in Namibe province, integration of Benguela province and future wind power plants to the national grid. The project transmission corridor is approximately 210 km and is part of a wider corridor stretching 710 km from Baynes – Tombwa – Moçamedes – ca Benguela Sul, and has regional significance, as it will form part of the western corridor along the Atlantic coastline. The project is supported by a grant fund from the AfDB.

Malawi – Zambia Interconnector Project

In the month under review, SAPP and the ESIA study consultant GOPA InTEC signed a consulting service contract on 15 January 2024.

Regional Transmission Infrastructure Financing Facility (RTIFF)



The SAPP CC Executive Director and CFM CEO pose for a photo post signing the SAPP – CFM RTIFF Agreement.

On the 11th day of January 2024, a historic milestone was achieved as the Southern African Power Pool (SAPP) and Climate Fund Managers (CFM) came together to formally sign the engagement agreement of the Regional Transmission Infrastructure Financing Facility (RTIFF). This pivotal agreement marks the commencement of the RTIFF's establishment process and operationalization, setting the stage for collaborative efforts in advancing crucial regional transmission infrastructure projects.

As a significant step forward, CFM assumes the pivotal role of leveraging its expertise in setting up climate funds to attract and engage investors in support of the RTIFF's objectives. This partnership signals a promising era for sustainable and resilient energy infrastructure development in the Southern African region, emphasizing the commitment to fostering economic growth and environmental sustainability.



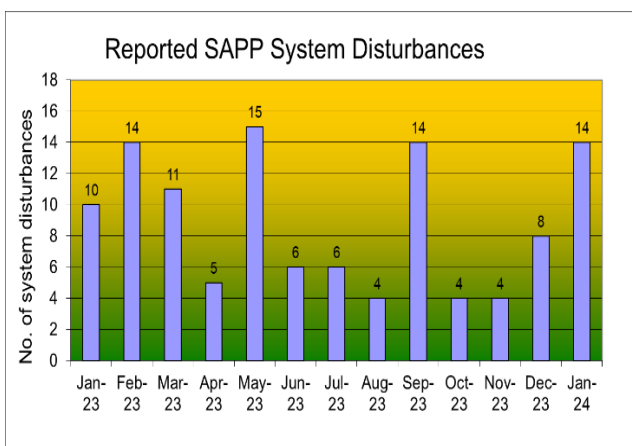
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System Operations

SAPP System Disturbances

In the month of January 2024, fourteen (14) system disturbances were reported. In the first one, all the three 220 kV Zambia - DR Congo interconnectors tripped. In the second one, the HVDC link in NamPower tripped on under-frequency protection. In the third one, a series of events led to black-out in Zimbabwe. Firstly, 330 kV busbar protection operated at a border substation. Secondly, a big load (473 MW) tripped in South Africa, leading to a state of high frequency (from 50.206 Hz to 50.526 Hz). Thirdly, two internal 330 kV transmission lines tripped in Zimbabwe, splitting the interconnected power system. Fourthly, key generation tripped in Zimbabwe due to underfrequency in one island. Subsequently, a generator tripped in Mozambique and lines feeding part of northern Mozambique and the 330 kV interconnecting line to Zimbabwe lost power supplies. The next ten system disturbances were low power frequency incidences (power frequency falling below 49.50 Hz) caused by generator trips in South Africa. The last one was also a low frequency incidence caused by Stage 3 load-shedding rotation activities in South Africa. Refer to the figure below for outlook of reported system disturbances in the last twelve months.



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Power Supply – Demand Situation

The table below shows the power supply and demand situation for January 2024 in SAPP member utilities.

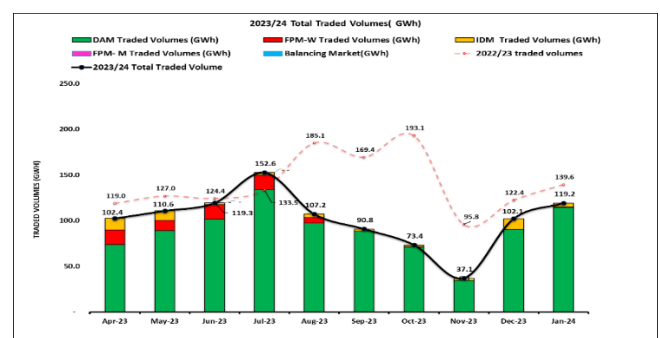
Country, Utility	Available (MW), during time of peak	Recorded Peak Demand (MW) ¹	Load Shed (MW)
South Africa, Eskom	26,657	24,754	-
Botswana, BPC	740	602	-
Eswatini, EEC	228.7	234.69	-
Mozambique, EDM and HCB ^{2,3}	992	960	-
Namibia, NamPower	616	603	-
Zambia, ZESCO, CEC	3,105	2,072	-
Zimbabwe, ZESA ²	1,622	1606	-
Lesotho, LEC	166	143	-
DR Congo, SNEL ²	2,034	1976	200

Notes: ¹Recorded peak demand – after load shedding
²Estimated figures
³EDM excludes MOZAL, which has been included in Eskom demand.

Electricity Trading

Traded Volumes

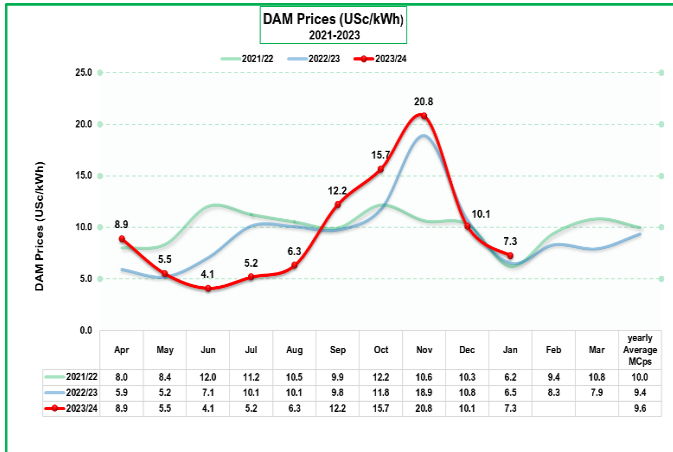
Total traded volumes in all the markets increased by 17% to 119.2 GWh in January 2024, from the December 2023 volume of 102.1 GWh.



Monthly Traded Volumes (GWh) in FPM-M, FPM-W, DAM, IDM, and BM (April 2023 to January 2024).

Market Energy Prices

The monthly average DAM market clearing price (MCP) for January 2024 was 7.3 USc/kWh. This was a 28% decrease when compared to the December 2023 market clearing price of 10.1 USc/kWh.



DAM Monthly Average Market Clearing Prices from 2021 to 2024.

Market Revenues

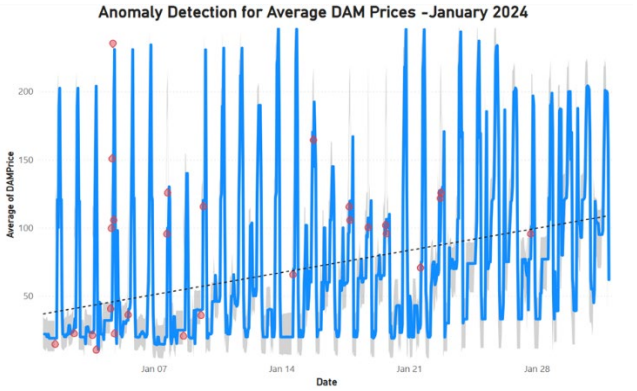
Total revenue of **USD 7.5 million** was exchanged on the competitive market during January 2024 compared to **USD 7.9 million** in December 2023. **USD 8.3 million** was exchanged on the competitive market during the same month of January in 2023.

Market Surveillance

Market Monitoring & Surveillance

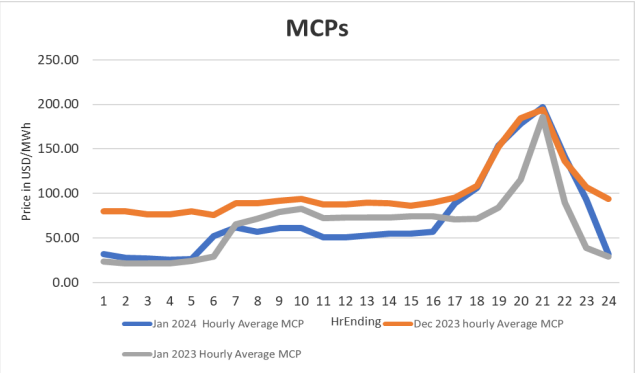
In the month under review, the MS Unit focused on monitoring and investigating the anomalies that were initially identified. These anomalies, while noteworthy, were found to be non-malicious in nature after thorough investigation.

In the period under review the unit observed an upward trend in DAM Prices. This trend aligns with historical patterns typically observed at the beginning of the year.



Several DAM Price anomalies were detected, and further analysis showed that these were due to interplay between demand and supply forces in the market.

Average DAM Clearing Prices for January 2024, December 2023, and January 2023.



The average hourly DAM clearing prices for January 2024 were higher than those of January 2023 during standard hours but lower than that for December 2023 for all hours of the day apart from evening peak hours where they were within the same range.

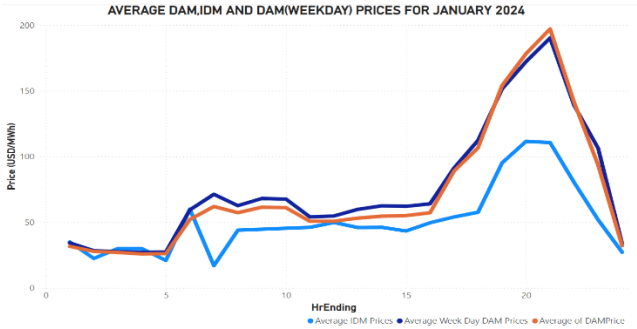
Average Hourly IDM and DAM Prices for January 2024

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



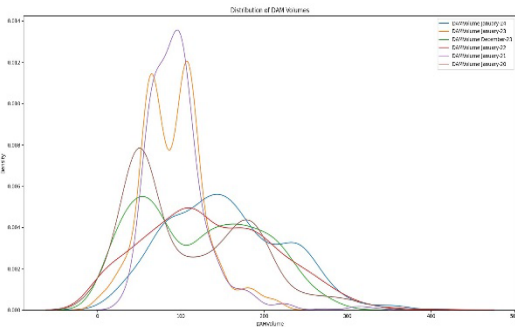
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Market Volumes

Utilities participated in the DAM and IDM with no activity in the forward physical monthly and weekly markets. 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 January 2024.

There were no cases of market abuse recorded during the month of January 2024.

Environmental Corner

Twenty-Eight Southern African Regional Climate Outlook Forum (SARCOF-28)

SARCOF 28 was held in Maputo, Mozambique from 29 to 31 January 2024 where a consensus outlook was presented for February-March-April (FMA), March-April-May (MAM) and April-May-June (AMJ) rainfall seasons over the SADC region. This forum was made possible with the support from SADC member states and the European Union. SAPP participated virtually in all the events of the forum.

It was noted that the bulk of the northern half of the SADC region (DRC, Tanzania, Northern Angola, Northern Malawi, Northern Mozambique) and the southeastern parts (Eswatini, Lesotho and south eastern South Africa) are likely to receive normal to above-normal rainfall for most of the period from February to June 2024, except for central parts of the region (Southern Angola, Zambia with the exception of the Northern fringes, Zimbabwe, central and southern Mozambique) and south-western parts where normal to below-normal and below-normal rainfall are expected. Below normal rainfall conditions are expected to persist over the western regions of the Southern African region, mostly in Botswana, Namibia, southern Angola, and south-western South Africa throughout the forecast period.

These seasonal dynamics are going to create a significant impact on hydro power generation, with Kariba Power station being the most affected. Similar effects are likely to be felt in mini hydro plants in the region where there is normal to below normal, and below normal rainfall. Investments in solar, wind and natural gas are encouraged, to close the gap created by spatial and temporal variability of rainfall.



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PCB SOP and Awareness

The assignment is now at an advanced stage in which the finalised database, PCB SOPs, and training manual are already in place. Outstanding deliverables include production of awareness fliers and videos. Respective drafts have been shared, and the consultant is currently incorporating comments from stakeholders to produce final products.

Upcoming Events – 2024

DATE	EVENT
5 - 6 Feb 2024	Market Surveillance Exchange Visit to FERC, USA
27-29 February 2024	SAPP Traders Certification Training Workshop on SAPP - MTP & SAPP Auction Markets. Johannesburg, South Africa
28-29 February 2024	HRWG Meeting, Johannesburg, South Africa
5 -7 March 2024	Africa Energy Indaba, Cape Town, South Africa
11 -15 March 2024	62 nd SAPP Management Committee Meetings in Ezulwini, Eswatini
18 - 20 March 2024	The Future Energy Show Africa Conference, Johannesburg, South Africa
25-28 March 2024	SADC Energy Sub-Committee Meetings in Johannesburg, South Africa
4 April 2024	56 th SAPP Executive Committee Meeting in Lusaka, Zambia
17-18 April 2024	14 th IRENA Assembly in Abu Dhabi, UAE
21 – 24 April 2024	High Level Power Sector Engagement Forum in Sharm El Sheikh, Egypt.
May 2024	DRC Stakeholders Engagement and Markets Roadshow, Kinshasa, DRC
24 - 30 May 2024	Enlit Africa Conference on Power, Energy and Water, Cape Town, South Africa
May 2024	SADC Energy Ministers Meeting, Luanda, Angola
25-28 June 2024	Africa Energy Forum, Barcelona, Spain

June 2024	59 th SAPP CC Board, Harare, Zimbabwe
August 2024	Traders and Controllers Certification Training
25 - 30 Aug 2024	2024 CIGRE Session, Paris, France
Sept 2024	63 rd SAPP Management Committee Meetings in Angola
October 2024	IEEE Power Africa (PAC2024) Conference, Johannesburg, South Africa
Oct 2024	57 th SAPP Executive Committee Meeting in Tanzania
Oct 2024	African Power Pools Forum
Nov 2024	Traders and Controllers Forum, Tanzania
4 – 7 Nov 2024	Africa Energy Leadership Summit in Kigali, Rwanda
Dec 2024	SAPP CC Board meeting in Harare, Zimbabwe



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