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Meetings, Workshops and Conferences

20th SAPP Finance Working Group Meeting

The Finance Working Group (FWG) of the SAPP CC Board held its 20th meeting virtually on 16 September 2021. The major outcome was the recommendation to the Board to approve the SAPP CC audited financial statements and the external audit report for the year ended 31 March 2021.

57th SAPP Meetings

The 57th SAPP general meetings were held during the month, starting with sub-committee meetings on 14 September 2021, then Coordination Centre Board meeting on 21 September 2021, and lastly Management Committee meeting on 28 September 2021.

Updates on various markets, planning, operations, and environmental issues of SAPP were shared. The discussions at the Board and the Management meetings included reviewing revisions to the SAPP Inter Utility Memorandum of Understanding (IUMOU) and Agreement Between Operating Members (ABOM). The Board during their meeting approved the SAPP CC audited financial statements and the external audit report for the year ended 31 March 2021. The Management meeting recommended to the Executive Committee the timing of the launch of the newly developed SAPP Balancing Market.

Meeting on Renewable Energy Projects Credit Enhancements

A meeting was held between the African Development Bank, a renewable energy developer in Zimbabwe and SAPP CC on 3 September 2021. The aim was to look at possible credit enhancements including



contracts for differences to allow renewable energy projects to be developed to supply the SAPP competitive markets using investor funds.

African Climate Week

The SAPP participated in the African Climate Week which took place during the week starting 26 September 2021. The overall objective of convening the session on Sustainable Energy in Africa, with a theme of “Seizing Transformative Opportunities”, was to create a platform for African national and regional officials, the private sector, financial institutions, NGOs, civil society representatives and other informal sectors to showcase ongoing efforts and inspire additional actions to tackle the climate crisis through sustainable energy solutions.

Transmission Grid Operation and Control

Siemens organized a webinar with a focus on “Transmission Grid Operation and Control tasks on different Time Horizons based on Spectrum Power™ 7”. The webinar was attended by various electrical power utilities and took place on 23 September 2021.

The presentation focused on Transmission Grid Operation and Control tasks on different Time Horizons, SCADA / Situational Awareness, Components of the Energy Management System (EMS) covering the following:

- Transmission Network Analysis (TNA)
- Dynamic Security Assessment (DSA)
- Automatic Generation Control (AGC)
- Generation Forecasting, Scheduling and Resource optimization (JROS)
- Energy Market Management (EMM)
- Cybersecurity

Market review on wheeling and electricity trading in Southern Africa

The SAPP participated in a webinar on Market review on wheeling and electricity trading in Southern Africa organised by ESI Africa.

SAPP World Bank Mission

The World Bank undertook a virtual mission to SAPP from 20 September 2021 to review the progress of the SAPP AREP Program. The activity plan with future areas of cooperation was updated.

System Planning

Transmission Pricing Model Review

Transmission pricing is based on a set of scenarios which, in aggregate, reasonably reflect system operating conditions with material impact on pricing. The power flow in the SAPP system will vary according to different categories of network operating scenarios that may occur during the year, for example, different demand, generation, hydrological conditions, hence several load flow scenarios are used to build up an annual picture of transmission use. A manual to develop the scenarios was issued by the consultant carrying out the review.

SAPP Database Management System

A clarification and contract negotiation meeting was held between SAPP and the Consultant on 7 September 2021 for Part 2 of the SAPP Data Management System. This part involves the setting up of the database management system at the SAPP Coordination Centre. The contract is being finalised.



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Update on SAPP Projects

Baynes Hydro-Power Plant Transmission Project

Technical and ESIA Studies:

On 8 September 2021, SAPP, PJTC and AfDB held a meeting to revise the Terms of References (TORs) for International Panel of Experts (IPOE), that will monitor and assess performance of the main Consultants on the project.

SAPP and SwedFund have continued the revision of Feasibility and ESIA study TORs, to ensure compatibility and alignment. It is hoped that final TORs will be approved by end of October 2021.

Kolwezi – Solwezi Interconnector Project

ESIA Studies:

ESIA studies for the DRC portion of the line have been completed and approvals granted.

ESIA Studies for the Zambian Portion of the line have been completed. Submission for authority review is expected to be later in October 2021.

Malawi – Zambia Interconnector Project

Technical and ESIA Studies:

On 30 September 2021, the World Bank approved the request for SAPP procurement to issue the Request for Proposal (RFP) for Feasibility and ESIA study consultancy services. It is hoped that the RFPs will be released to the market in early October 2021.

Mozambique – Zambia Interconnector Project

Technical Studies:

On 9 and 16 September 2021, AFRY, EDM, ZESCO, AfDB and the World Bank held validation workshops on the network study report. The findings suggest that the line design is technically, economically, and financially viable, in view of positive benefits and an Economic Internal Rate of Return (EIRR) of 20%. The discussions turned on the possibility to finish the feasibility study as per the July 2020 framework of network analysis. Therefore, some highlights of the network analysis include the following:

- Economic feasibility is dependent on the installation of hydropower generation resources in the two countries.
- Sensitivity analysis shall be carried out on results of the network analysis to assess the impact of delayed deployment of generation resources in both countries, up to a minimal EIRR of 12%.
- In the case of the power system of Mozambique, sensitivity analysis shall be done considering delayed commissioning of the Mphanda Nkuwa 1,500 MW hydropower plant.
- In the case of the power system of Zambia, sensitivity analysis shall be done considering delayed retirement of hydropower plants from the initial generation expansion plan which included Kabompo plant at 49MW, Kalungwishi plant at 247MW, Lusiwasi plant at 100MW, Batoka Gorge plant at 2,400MW, Devils Gorge plant at 619MW and Mpata Gorge plant at 539MW.

ESIA Studies:

The Draft ESIA Reports are being revised to include discussions of the public meetings that took place in August 2021. The submission of the revised reports is expected in mid-October 2021.



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Zambia – Tanzania Interconnector Project

Technical Studies:

On 15 September 2021, WSP, ZESCO and SAPP held a validation workshop to review and harmonise Lots 1 and 4 tender documents. Lot 1 is for the Pensulo-Mpika 330kV line and line switchgear specifications and Lot 4 is for the Nakonde to the border 330kV line specifications only. Lot 1 and 4 tender documents are now approved. The remaining tender documents covering Lot 2,3 and 5 will be reviewed in early October 2021, after which the project comes to an end at the month-end of October 2021.

ESIA Studies:

Following several iterations on the Draft ESIA report that was submitted to ZEMA, a no objection to submit the final version for decision making has been received. ZESCO will be submitting the final report in the next few weeks, targeting early October 2021 as the deadline for this submission.

Regional Transmission Infrastructure Financing Facility (RTIFF)

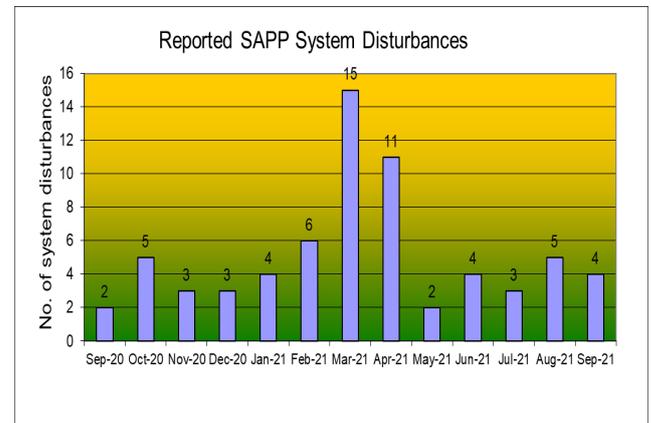
The World Bank issued a “No Objection” for Phase 2 of the RTIFF project to take off. The SAPP and the Consultant, Pegasys finalized the contract, and the second phase of the assignment will kick off in October 2021.

System Operations

SAPP System Disturbances

In the month of September 2021, four (4) SAPP system disturbances were reported. Three were caused by loss of generation units in South Africa resulting in power frequency excursions below 49.50 Hz. The last one was caused by bush fire beneath power lines resulting in the tripping of the 400 kV South Africa – Botswana – Zimbabwe

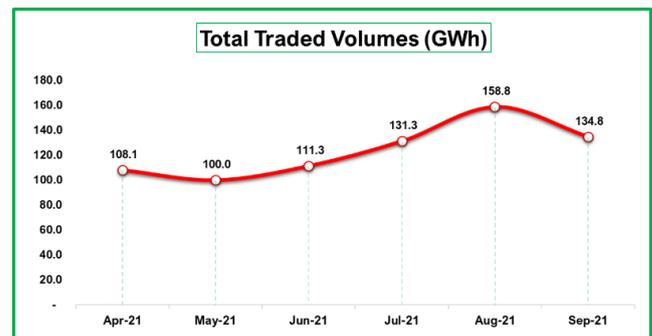
interconnector. See figure below for general outlook of reported SAPP system disturbances in the last 12 months.



Electricity Trading

Traded Volumes

Trading on the market was lower during the month of September 2021 when compared to August 2021. Total traded volumes on the Day Ahead Market (DAM), Intra-Day Market (IDM), Forward Physical Monthly Market (FPM-M), and Forward Physical Weekly Market (FPM-W) decreased by 15% to **134.8GWh** in the month of September 2021, from the August 2021 volume of **158.8 GWh**.



Monthly Traded Volumes (GWh) in DAM, IDM, FPM-W, and FPM-M (April 2021 to September 2021).



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Market Prices

FPM Monthly Prices

The September 2021 market clearing price for the non-off-peak period was 10.0 USc/kWh, down from the August 2021 figure of 15.1 USc/kWh. The price for the off-peak period decreased to 4.3 USc/kWh in September from the August 2021 figure of 6.0 USc/kWh.

FPM Weekly Prices

The average market clearing price for the peak period was lower by 14.5% at 19.4 USc/kWh in September 2021 from the August 2021 figure of 22.7 USc/kWh. Standard period average market clearing prices decreased from the August 2021 figure of 10.3 USc/kWh to 9.8 USc/kWh in September 2021. The average off-peak market clearing price for the month of September 2021 was 4.4 USc/kWh. During the month of August 2021, the average off-peak price was at 5.4 USc/kWh.

Day Ahead Market

The monthly average DAM market clearing price (MCP) was lower by 6% during the month of September 2021 at 9.9 USc/kWh when compared to 10.5 USc/kWh recorded in August 2021.

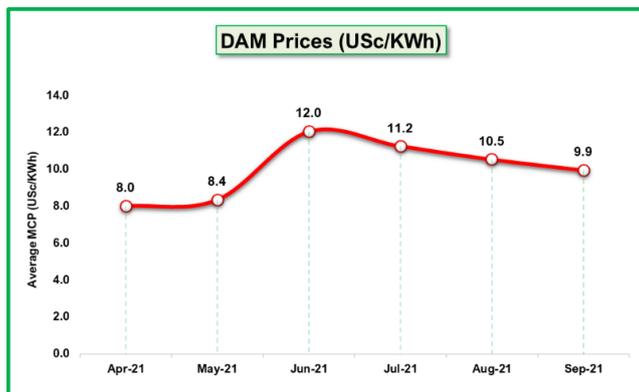


Fig 9.1 Monthly Average Market Clearing Prices from April 2021 to September 2021.

Intra Day Market (IDM)

The average IDM price for the peak period for the month of September 2021 was 8.1 USc/kWh, down from the August 2021 figure of 13.0 USc/kWh. The average IDM price for the standard period was 6.3 USc/kWh in September 2021, down from the figure of 9.2 USc/kWh recorded in August 2021. The average off-peak period price recorded for September 2021 was 3.2 USc/kWh, down from the August 2021 figure of 4.1 USc/kWh.

Market Revenues

A total of USD 12 million was exchanged on the competitive market during the month of September 2021 when compared to USD 16 million exchanged in August 2021. The change is mainly attributed to changes in prices and traded volumes. USD 12 million was exchanged on the competitive market during the same month of September in 2020.

Market Monitoring and Surveillance

During the month under review there were no observed cases of market manipulation or use of insider information. On year-on-year basis compared to September 2020, the Market Clearing Prices (MCPs) for September 2021 were relatively higher due to the easing of the COVID-19 lock-down restrictions within the SAPP Market region.

According to the transmission allocation rules, transmission capacity utilisation was deemed to be efficient for the month under review. The Market Operator observed its own processes and procedures.

Environmental Corner

International Forum for Energy Transition 2021

The SAPP participated, virtually, in the International Forum for Energy Transition



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2021, on 9th September 2021, at the invitation of State Grid Corporation of China (SGCC). The theme of the forum was “A pathway towards carbon neutrality and sustainable energy future”. The Forum was hosted by SGCC and the International Renewable Energy Agency (IRENA), in collaboration with World Economic Forum, co-hosted by leading power utilities around the world, including Eskom from South Africa, EDF From France, ENEL from Italy, Eletrobras from Brazil, OAO Rosseti from Russia, and Energi Denmark A/S from Denmark.

Salient points of discussion at the Forum, include the following:

a) The energy system will be reshaped in pursuit of climate ambition as espoused by the Paris Agreement:

- China expects to peak its carbon emission in 2030 and attain carbon neutrality in 2060
- The clean energy transition has accelerated significantly, imposing tremendous impact on traditional energy system, and new energy systems are taking shape in many countries. It will be a fundamental reform.
- Diversified energy consumption: Various new types of equipment have emerged, giving rise to more diversified, customized, integrated and interactive ways to use energy.
- New business opportunities: Energy transition will reshape the energy industry, giving birth to new businesses, business forms and business models, and form an energy ecosystem never seen before.

b) Energy transition calls for the building of a power system based on new energy:

- The Power Sector is the key to Energy Transition: Electricity is the main carrier of new energy resources and development of future power systems will be based on new energy
- Provide viable solution to large-scale integration and accommodation of new energy: Improve grid structure, system flexibility and control capability
- Friendly to new types of power consumption: The power system based on new energy will increase resilience of the system which can well adapt to the profound changes on demand side.
- A powerful support to the efficient coordination and interaction of sources, grids, loads and storage: The system will become more visible, measurable, smart and user-friendly through digitalization.
- Promote sector coupling: A power system based on new energy will effectively play the coupling and complementary effect of different energy systems and improve the overall energy efficiency.

Consultative Workshop on Minimum Energy Performance Standards and Energy Efficiency Credit Facility Guidelines

The SAPP participated, virtually, in a Consultative Workshop on Minimum Energy Performance Standards, Energy Efficiency Credit Facility Guidelines, Demand Side Management Guidelines and Gender Mainstreaming Strategy and Action Plan, at the invitation of the Common Market for Eastern and Southern Africa (COMESA).

The COMESA and the European Union (EU) have a Delegation Agreement from 2017 for financing the five Regional Economic Communities (RECs) in the Eastern Africa, Southern Africa and Indian Ocean (EA-SA-IO) region, namely COMESA, EAC, IGAD, IOC and SADC to implement a programme



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on Enhancement of a Sustainable Regional Energy Market.

The programme is intended to enhance sustainable regional energy market conducive to investment and promoting sustainable development. The programme aims to address market governance and regulatory related challenges that are impacting on the implementation of energy development projects in the EA-SA-IO region, specifically through:

- a) Achieving an enhanced harmonized, efficient and gender-sensitive regulatory environment in the EA-SA-IO region; and
- b) Capacitating regional regulatory associations and power pools to oversee and stimulate increased regional power trade more effectively.

The workshop deliberations were based on the following areas of discussion:

- Gender Mainstreaming
- Demand Side Management
- Energy efficient Credit Facility Guidelines
- Standards and Labelling (S&L)

Virtual Conference on Sharing Experiences of Gender and Renewable Energy Innovations

The Southern African Research and Documentation (SARDC) through its Beyond Inequalities Gender Institute is organizing a conference, scheduled for 10-11th November 2021, aimed at providing a platform to share innovations in the renewable energy sector that advance gender equality. The SARDC has invited the SAPP to participate in this Conference. The conference will provide a platform that brings together stakeholders in the renewable energy sector to discuss success stories, innovations, experiences, challenges, lessons learned and how to carry them forward.

The conference will offer participants an opportunity to engage with various stakeholders. However, preceding the Conference, the SAPP responded to a call to submit an expression of interest to a presentation paper at the Conference. To this effect, the SAPP submitted a Paper, on 29th September 2021, on “Gender and Renewable Energy Innovations for Socio-Economic Empowerment. “

SADC PCB Elimination Project

Monthly Project Meeting

The Africa Institute (AI), the executing agency of the SADC PCB Elimination project, convened the project monthly meeting on 22nd September 2021. The following were the salient discussion points:

- A gender mainstreaming training workshop was held on 8th September 2021
- National consultants were scheduled to commence work in the respective countries on 1st October 2021, to assist with all outstanding activities on the Project
- The disposal contract on the Project will be executed in two (2) parts: (i) Disposal of PCBs; and (ii) Pilot for the decontamination. The contract is anticipated to be effected in the first quarter of 2022.
- Up to USD 10,000 is available per country to conclude outstanding inventory activities. However, a proposal and work plan will be required for release of funds.

SAPP PCB Awareness Programme

The SAPP ESC PCB Task Team convened a virtual meeting on 29th September 2021, wherein the the following activities were conducted:

- Work plan for the SAPP PCB awareness programme was updated.



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- The questionnaire to establish Component 1 of the Work Plan: - Assessment of the utilities' capacity for the Implementation of PCB Education and Awareness Programmes, was drafted.

SAPP Climate Change Study

The SAPP ESC Climate Change Task Team updated the Terms of Reference (ToRs) for the afore-captioned study. The revised ToRs have since been submitted to the SAPP procurement unit to facilitate recruitment of a consultant.

Upcoming Events – 2021

DATE	EVENT
4 October 2021	OSC and TWG meeting on Cyber Security, Virtual
7 October 2021	51 st SAPP Executive Committee Meeting and SAPP AGM, Virtual
12 -14 October 2021	Forum for African Power Pools and APUA Meetings, Senegal and Virtual
13 -15 October 2021	SADC Energy Sub Committee Meetings, Virtual
20 -21 October 2021	18th Energy Traders and System Controllers Forum, Virtual
25 October 2021	SADC Energy Thematic Group Meeting, Virtual
26 October 2021	SAPP Legal Working Group Meeting, Virtual
09 November 2021	Joint SAPP MSC and OSC Meeting, Virtual
Oct / Nov 2021	SADC Energy Ministers Meetings
16-19 November 2021	AUDA-NEPAD African Power Pools Workshop on Continental Master Plan, Johannesburg
December 2021	49th SAPP CC Board Meeting
December 2021 / Jan 2021	SAPP Finance Working Group Meeting



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