

CONTENTS

Meetings, Workshops and Conferences .	1
<i>Continental Masterplan Modelling</i>	1
<i>47th SAPP CC Board Meeting</i>	1
System Planning	1
<i>Review of SAPP Load Forecasting Methodology</i>	1
<i>Transmission Pricing Model Review</i>	2
<i>SAPP Generic Production Costing Model Training</i>	2
Update on SAPP Projects	2
<i>ANNA Project</i>	2
<i>Baynes Hydro-Power Plant Transmission Project</i>	3
<i>Kolwezi – Solwezi Interconnector Project</i> ..	3
<i>Malawi – Zambia Interconnector Project</i>	3
<i>Mozambique – Zambia Interconnector Project</i>	3
<i>Zambia – Tanzania Interconnector Project</i> ..	4
<i>Regional Transmission Infrastructure Financing Facility (RTIFF)</i>	5
System Operations	5
<i>SAPP System Disturbances</i>	5
Electricity Trading	5
<i>Traded Volumes</i>	5
<i>Market Energy Prices</i>	5
<i>Market Revenues</i>	6
<i>Market Monitoring and Surveillance</i>	6
Environmental Corner	6
<i>World Bank Partnership for Market Readiness: Regional Carbon Pricing Platform for Southern Africa</i>	6
Upcoming Events – 2021	7

Meetings, Workshops and Conferences

Continental Masterplan Modelling

A meeting was held on 23rd July 2021 to discuss the outcomes from the first training on the MESSAGE generation planning software, the progress made by the nominated experts, as well as the significance of Continental Master Plan

capacity building activities and the important role of the power pools.

The main objectives of the meeting were to:

- Establish common understating on the development of the CMP modelling activity among EU, AUDA NEPAD, AUC, Power Pools, IRENA and IAEA
- Achieve commitment and contribution from all parties involved in the development of the CMP modelling activity
- Agree on a common action plan for the CMP

47th SAPP CC Board Meeting

The 47th Coordination Centre Board meeting was held virtually on 27 July 2021. Among other things the Board discussed revisions to the SAPP Inter-Utility Memorandum of Understanding (IUMOU).

System Planning

Review of SAPP Load Forecasting Methodology

Credible long-term electricity demand forecasts are essential for the strategic planning of the electricity sector across the generation, transmission, and distribution sectors. The forecasts are intended to reasonably reflect the electricity demand required to support and underpin the economic growth targets of a country or a region and are used in the planning process to determine the sizing, timing and type of electricity infrastructure investment required to meet the electricity demand.

Demand forecasts that do not reasonably reflect the future demand in the economy can have significant consequences for the economy of a country or region as it may



result in over or under-investment in the sector.

For regional planning purposes, the SAPP has developed a uniform load forecasting methodology based on accepted industry practice to be used by SAPP members and SAPP CC when preparing country-level and regional forecasts, respectively.

The project has been completed and during the month under review the following deliverables were achieved:

- Delivery of the Final report
- Delivery of the load forecast model and manuals
- Training workshop on the use of the model and manual

Transmission Pricing Model Review

The project “Improvement of the SAPP Transmission Pricing Methodology for Implementation” is on-going.

During the period under review two task team meetings were held on the 8th and 29th July 2021. The ongoing work was on refining the approach and specifically building the pricing tool.

During the month of August 2021, the following activities are planned:

- Workshop to discuss the load flow scenarios.
- Training Session 1 (Theoretical basis for transmission pricing model including the background to the methodology and principles of the model)
- Training Session 2 (Recap of Python and overview of source coding in the model)
- Training Session 3 (Key building blocks of the Transmission Pricing tool and the overview of using Python for manipulating PSS/E)

- Training Session 4 (Hands-On training on use of the model)

SAPP Generic Production Costing Model Training

The SAPP has embarked on a project “SAPP Generic Production Costing Model” to enhance planning skills within the SAPP members’ planning and market operations teams with the assistance of the USAID Southern African Energy Program (SAEP).

The roll-out of the model is divided in two phases, both incorporating workshops with training sessions. Phase 1 has been completed and a workshop was held with the SAPP Planning Sub-Committee (PSC) on the 10th of June 2021. The main objective of the workshop was to introduce the models to the PSC, discuss and decide on enhancements, training specifically on data requirement and use thereof in the models.

The second phase includes updating the model with decisions made during the first workshop and the finalisation of the models and User Manual. A second workshop to present the final models and hands-on training is planned for 5-6 August 2021.

Update on SAPP Projects

ANNA Project

The SAPP PAU and project stakeholders held the ANNA Project Management Committee (MANCO) meeting on 20 July 2021, to discuss (i) Close out tasks under Phase 2, and (ii) TORs and scope of work for Phase 3 of the study.

The MANCO passed the following decisions:

- **Decision 1:** MANCO agreed that Phase 2 activities will be completed when the final feasibility study report has been submitted.



Southern African Power Pool (SAPP)
 24 Golden Stairs Road, P.O. Box EH52, Emerald Hill,
 Harare, Zimbabwe,
 Tel: +263-4-335517/335558 / 335468 Fax: +263-4-307023
 Email: info@sapp.co.zw Website: www.sapp.co.zw



- **Decision 2:** MANCO agreed to extend the Consultant's service contract for a period that will cover Phase 3 activities until December 2022.
- **Decision 3:** The Facility Agreement between DBSA and SAPP shall be extended until December 2022.
- **Decision 4:** MANCO agreed that the Consultant could commence Phase 3 task implementation after review and finalisation of the study TORs.

Baynes Hydro-Power Plant Transmission Project

Procurement tasks of floating the RFP bids for the procurement of techno-economic study services have advanced. In progress is the refinement of the techno-economic study TORs for use in advertising for the RFP to potential bidders.

Technical Studies:

- The PAU held several meetings with AUDA NEPAD, Project Joint Technical Committee (PJTC) and AfDB, to mobilise funding support, in view of the techno-economic study funding gap.

ESIA Studies:

- The ESIA study TORs have been reviewed and finalised.
- Finalisation of aligned implementation schedules for the techno economic and ESIA studies and harmonisation of terminologies in the respective TOR documents is in progress.
- A Panel of Experts collected information from SAPP and the PJTC, for the appraisal of the project, with emphasis on the environmental and social aspects of the project, key stakeholder, and beneficiary groups.

Kolwezi – Solwezi Interconnector Project

ESIA Studies:

In the month under review, most of the consultancy team had taken summer leave, hence intensity of project activities was on the low side. The following were recorded:

- The AFRY service contract has been extended to 30 August 2021.
- RCAP DRC – SNEL has approved payment to ACE, the environmental authority in that country.
- ESIA and RCAP (Zambia) - The final versions of both reports have been submitted to ZEMA, the environmental authority.

Malawi – Zambia Interconnector Project

The World Bank has approved the EOI report. Clearance for the start of RFP process may start in early August 2021.

- The World Bank requested the PAU to estimate the cost of training and validation workshops for the techno-economic and ESIA studies, and cost estimates results, this process will be completed early August 2021.
- Calculation of proposed man-months for scheduling and deployment of key experts, over the implementation period is in progress, and will be completed in August 2021.

Mozambique – Zambia Interconnector Project

Technical Studies:

Tax for Geotech work in Zambia

Tax exemption issues affecting Geotech work in Zambia have been resolved as follows:

- AFC has agreed to absorb the USD 8000 tax fee, to relieve ControlLab of cash



Southern African Power Pool (SAPP)
 24 Golden Stairs Road, P.O. Box EH52, Emerald Hill,
 Harare, Zimbabwe,
 Tel: +263-4-335517/335558 / 335468 Fax: +263-4-307023
 Email: info@sapp.co.zw Website: www.sapp.co.zw



shortage since the payment delays on geotechnical services are long overdue.

- SAPP and ZESCO have continued to pursue the decision by the ZRA (tax authority in Zambia), to ensure future similar projects are not adversely impacted.

Network Study and Economic Viability Report

Network analysis results suggested high magnitude power flows from the ZESCO network and into the EDM network, and low quantities in the opposite direction.

Further, simulation of economic benefits suggested very poor returns on investment (NPV and IRR), noting that there was insufficient power generation data to improve viability of the transmission line.

- SAPP requested that AFRY updates generator data to include new developments on the EDM and ZESCO networks, but also extend the network analysis study horizon to 2030.
- EDM and ZESCO have been requested to update their generation capacity data sheets with latest information, so that network and financial modelling can lead to favorable cost benefit results.

ESIA Studies:

Environmental Studies:

Letter to Zambian Environmental Agency

In light of the instruction issued by the Zambian Government to suspend all the public gatherings due to COVID-19 pandemic, the Consultant made a suggestion of two proposals for disclosure of the Draft ESIA Reports. The approved proposal was the submission of a letter of appeal to ZEMA to wave the disclosure process and go ahead with review of the draft ESIA reports as a way

of making progress under the circumstances. The response from ZEMA is still pending.

Finalising Draft ESIA Reports

ZESCO approved the ESIA Reports for public disclosure purposes. EDM approved the English version of the ESIA Report. The Portuguese version will adopt all the required amendments raised in a form of comments. Approval of the Draft ESIA - Portuguese version – is expected to be in early August 2021.

Public Disclosure Plan

A revised public disclosure plan was received in light of the new regulations in Zambia with regards to gatherings.

The new plan recommended virtual meetings and telephonic conversations with stakeholders as far as possible. However, there is the real possibility that this plan may not reach as many PAPs as previously hoped. The plan is a working document and will be adjusted as required.

Zambia – Tanzania Interconnector Project

Technical Studies:

On 15 July 2021, WSP held a validation workshop with ZESCO and SAPP, to review and harmonise employer's requirements and Lot 1 substation specifications for tender documents.

Transmission substation hardware equipment standards and specification, and Bill of Quantities (BOQ) were discussed and harmonised, for tender document consolidation and submission for final approval.

The project will be closing at the end of October 2021.



Southern African Power Pool (SAPP)
24 Golden Stairs Road, P.O. Box EH52, Emerald Hill,
Harare, Zimbabwe,
Tel: +263-4-335517/335558 / 335468 Fax: +263-4-307023
Email: info@sapp.co.zw Website: www.sapp.co.zw



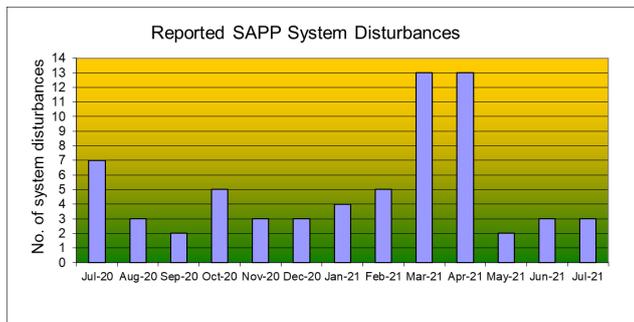
Regional Transmission Infrastructure Financing Facility (RTIFF)

The SAPP met with KfW as part of the ongoing funder engagement meetings in July 2021. The SAPP also developed a two-page flier to promote information dissemination to interested RTIFF stakeholders. The second phase of the assignment is expected to start soon.

System Operations

SAPP System Disturbances

In the month of July 2021, three (3) SAPP system disturbances were reported. The first one was a low power frequency excursion incident. A generation unit tripped that was generating 659 MW in the South African system. Power frequency dropped from 49.94 Hz to 49.49 Hz. In the other two disturbances, loads of about 199 MW were lost in DR Congo, affecting energy interchange between Zambia and Zimbabwe. Refer to figure below for the general outlook of reported SAPP system disturbances in the last twelve months.

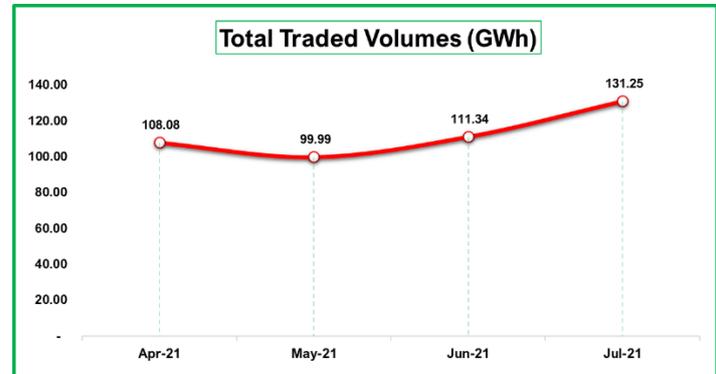


Electricity Trading

Traded Volumes

Trading on the market was higher during the month of July 2021 when compared to June 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) increased by 18% to 131.25 GWh in the month of July 2021, from the June 2021 volume of 111.34 GWh.



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

Market Energy Prices

FPM Monthly Prices

The July 2021 market clearing price for the non-off-peak period was 13.1 USc/kWh, down from the June 2021 figure of 13.8 USc/kWh. The price for the off-peak period increased to 6.0 USc/kWh in July as compared to the June 2021 figure of 3.6 USc/kWh.

FPM Weekly Prices

The average market clearing price for the peak period was higher by 1.4% at 21.6 USc/kWh in July 2021 from the June 2021 figure of 21.3 USc/kWh. Standard period average market clearing prices increased from the June 2021 figure of 10.3 USc/kWh to 10.7 USc/kWh in July 2021. The average off-peak market clearing price for the month of July 2021 was 5.7 USc/kWh. During the month of June 2021, the average off-peak price was at 5.0 USc/kWh.

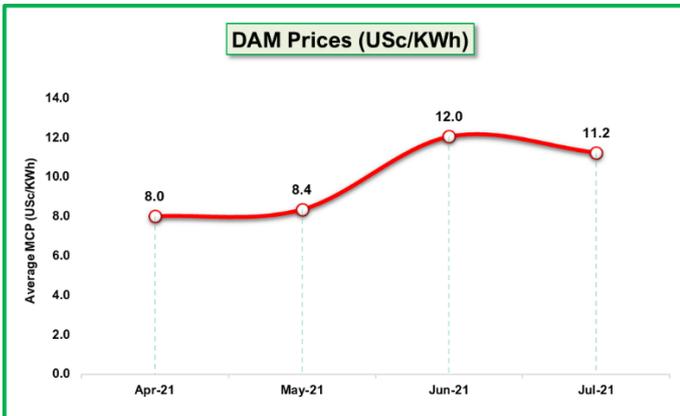


Southern African Power Pool (SAPP)
 24 Golden Stairs Road, P.O. Box EH52, Emerald Hill,
 Harare, Zimbabwe,
 Tel: +263-4-335517/335558 / 335468 Fax: +263-4-307023
 Email: info@sapp.co.zw Website: www.sapp.co.zw



Day Ahead Market

The monthly average DAM market clearing price (MCP) was lower by 7% during the month of July 2021 at 11.2 USc/kWh when compared to 12.0 USc/kWh recorded in June 2021.



Monthly Average Market Clearing Prices from April 2021 to July 2021.

Intra Day Ahead Market (IDM)

The average IDM price for the peak period for the month of July 2021 was 14.6 USc/kWh, down from the June 2021 figure of 14.8 USc/kWh. The average IDM price for the standard period was 9.5 USc/kWh in July 2021, down from the figure of 12.3 USc/kWh recorded in June 2021. The average off-peak period price recorded for July 2021 was 4.6 USc/kWh, down from the June 2021 figure of 7.8 USc/kWh.

Market Revenues

A total of USD 14.29 million was exchanged on the competitive market during the month of July 2021 when compared to USD 11.97 million exchanged in June 2021. The change is mainly attributed to changes in prices and traded volumes. USD 9.11 million was exchanged on the competitive market during the same month of July 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 July 2020, the Market Clearing Prices (MCPs) for July 2021 were relatively higher due to the easing of the COVID-19 lock-down restrictions within the SAPP region and due to the winter period.

Transmission capacity utilisation was deemed to be efficient according to the transmission capacity allocation rules.

The Market Operator observed its own processes and procedures.

Environmental Corner

World Bank Partnership for Market Readiness: Regional Carbon Pricing Platform for Southern Africa

The Concept Note (CN) for the “*Regional Climate Market Platform*”, through a series of iterations has since been converted into a proposal for the “*Regional Carbon Pricing Platform*” and submitted to the World Bank for review. This is against the background that numerous market instruments already exist and therefore a pricing mechanism would be of more significance to the Region. It is still expected that a minimum of three (3) Member States will champion the creation of the Regional Climate Pricing platform, after which other Member States (MS) can join.

The Proposal further proposes to commence with the Power sector then move on to other sectors as resources permit on a demand driven basis. The Proposal augments the CN position placing SAPP in the coordination role for the proposed follow up activities towards a regional pricing platform. This will be followed by stakeholder consultations



Southern African Power Pool (SAPP)
 24 Golden Stairs Road, P.O. Box EH52, Emerald Hill,
 Harare, Zimbabwe,
 Tel: +263-4-335517/335558 / 335468 Fax: +263-4-307023
 Email: info@sapp.co.zw Website: www.sapp.co.zw



involving other relevant SADC agencies and some MS Climate Focal Points to deliberate on the proposal prior to submission for funding.

Upcoming Events – 2021

DATE	EVENT
14 September 2021	57 th SAPP Sub-Committee Meetings, Virtual
21 September 2021	48 th SAPP CC Board Meeting, Virtual
28 September 2021	57 th SAPP Management Committee Meeting, Virtual
28 October 2021	51 st SAPP Executive Committee Meeting and SAPP AGM
October 2021	SADC Energy Ministers Meetings
2 December 2021	49 th SAPP CC Board Meeting



Southern African Power Pool (SAPP)
 24 Golden Stairs Road, P.O. Box EH52, Emerald Hill,
 Harare, Zimbabwe,
 Tel: +263-4-335517/335558 / 335468 Fax: +263-4-307023
 Email: info@sapp.co.zw Website: www.sapp.co.zw

