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Meetings, Workshops and Conferences

Workshop on African Continental Master Plan Project

A virtual workshop for Power Pools, Regional Regulators and Regional Economic Communities was convened by NEPAD focusing on the development of a Continental Master Plan. The objective of the workshop was to agree on the approach and methodology for the assignment.

SADC Energy Thematic Group Meeting

A SADC Energy Thematic Group (ETG) meeting was held virtually on 5 May 2020. The ETG is now co-chaired by the African Development Bank who took over from USAID.

SAPP 48th Executive Committee Meeting

The SAPP 48th Executive Committee (EXCO) meeting was held virtually on 18 May 2020 and was chaired by the Eskom Group Chief Executive. The NamPower Managing Director was elected as the next Chairperson with the ZESCO Managing Director as the Vice Chairperson.

Validation Meeting on Harmonised Regulatory Framework for Electricity Market in Africa

SAPP participated in a validation meeting held virtually on 26 May 2020 on the Harmonised Regulatory Framework for Electricity Market in Africa. This task looks at regulatory requirements for the establishment of an Africa-wide electricity market.



System Planning

Review of SAPP Load Forecasting Methodology

The SAPP has embarked on a project to benchmark and evaluate the different load forecasting methodologies and approaches used by the SAPP utilities. A common approach will then be recommended to be used as a minimum standard for developing the load forecasting techniques.

As a result of the Corona virus (COVID-19) pandemic, the technical evaluations were conducted remotely by each Load Forecasting Task Team members and a consolidation meeting was held on 30 May 2020 to finalise the technical and financial evaluations.

Impact of the Integration of Renewable Energy Technologies on SAPP Grid – Part 2

The focus of the Part 2 work is on detailed simulations of the operation of the SAPP power systems with a higher level of VRE penetration.

A workshop is planned to be held where the preliminary results will be presented to the PSC and OSC.

Setting up SAPP Data Management System

The SAPP is setting up a data management system which aims to enable SAPP to have a central depository of all data related to planning, project preparation and development, operations, markets and environment. This will be assisting the SAPP to easily access the data for any future requirements or studies.

The process of procuring a Consultant for this task is on-going. The expression of Interest was published on the SAPP website with submissions due on 1st May 2020. Evaluation

of the proposals was carried out during the month.

Update on SAPP Projects

Angola – Namibia Interconnector Project

The submission of the Final Draft Feasibility Study Report is behind schedule due to delays on the environmental process impacted by COVID-19. The environmental workstream is on the critical path.

The Risk Register and Draft Project Information Memorandum (PIM) structure is being prepared to be incorporated into the Final Draft Feasibility Report.

The Final ESIA Report for Namibia was submitted to MET, DEA and MME in March 2020 and would take approximately 2 months for a decision to be made. However, no official communication has been received from MET due to the lockdown as a result of COVID-19.

The Final ESIA Report and associated documentation for Angola was submitted to RNT in April 2020 for onward submission to the Environmental Authorities, DNPAIA (now MCTA). Submission of the documents has been delayed due to the COVID-19 lockdown. The ESIA process should run within 90 days including the Stakeholder Engagement (SE) process which was scheduled for June 2020 and has also been affected.

Botswana – South Africa Interconnector Project

SAPP and Eskom reviewed the Draft Amended ESIA Report at a meeting held on 5 May 2020. The project cannot commence with the public consultation as such activities require gathering stakeholders for meetings. The COVID-19 lockdown rules in South Africa



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



prohibited public gatherings and this created a delay and uncertainty on the project timeline due to the lockdown restrictions.

Inga – Soyo Interconnector Project

This is the proposed interconnector project between DRC and Angola. The Project Concept document has been presented in French and Portuguese. SAPP is still awaiting translation of the document in English which will be conducted by RNT. SAPP had a meeting with the NEPAD IPPF Energy Sector Task Manager with regards to a request for funding.

Zambia – Tanzania Interconnector Project

The Consultant conducted a detailed review of the preferred transmission line route provided by ZESCO and other previous studies.

The Inception Report was submitted on 29 May 2020. ZESCO submitted the Draft Final Amendment ESIA Report to Environmental Authority, ZEMA for review.

Luapula Hydro Power Project

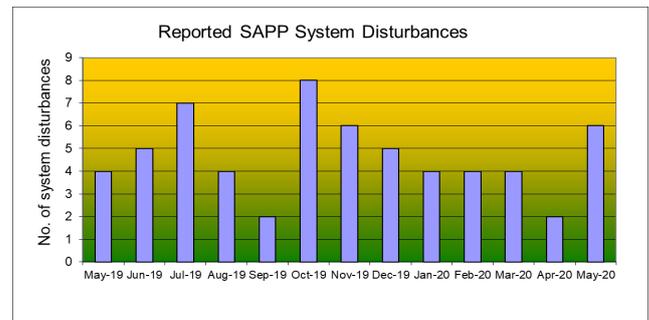
The Final Pre-Feasibility Study Report concluded that 3 sites could be viable options for further assessment during the Feasibility Study.

System Operations

SAPP System Disturbances

One of the three 220 kV interconnectors between Zambia and DR Congo tripped on three occasions: firstly, due to bush fires, secondly due to HVDC system fault in DR Congo, and thirdly due to conductor vandalism. In all these events, load was lost in DR Congo and the Zambian system experienced power frequency and voltage fluctuations. The fourth disturbance during

the month was caused by a 120 kV busbar fault in DR Congo. This also led to loss of load in DR Congo and power and voltage fluctuations in Zambia. The fifth disturbance was the tripping of the 330 kV Mozambique - Zimbabwe interconnector due to a line fault in Zimbabwe. In the sixth and last disturbance, one HVDC converter bridge tripped at Songo in Mozambique and rejected power onto the AC network, leading to tripping of the 330 kV Mozambique - Zimbabwe interconnector on power swing protection. The Figure below gives the general outlook of reported SAPP system disturbances. Some SAPP system disturbances affect power interchange among member utilities while others result in power frequency excursion outside the specified band.



Electricity Trading

Volumes

Trading on the market was higher during the month of May 2020 when compared to April 2020. 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 5% to 125 GWh in the month of May 2020, from the April 2020 volume of 120 GWh. The May 2020 traded volume was lower by 2% when compared to May 2019 in which traded volumes were 128GWh.



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Monthly Traded Volumes (GWh) in DAM, IDM, FPM-W and FPM-M (January to May 2020)

Prices

FPM Monthly Prices

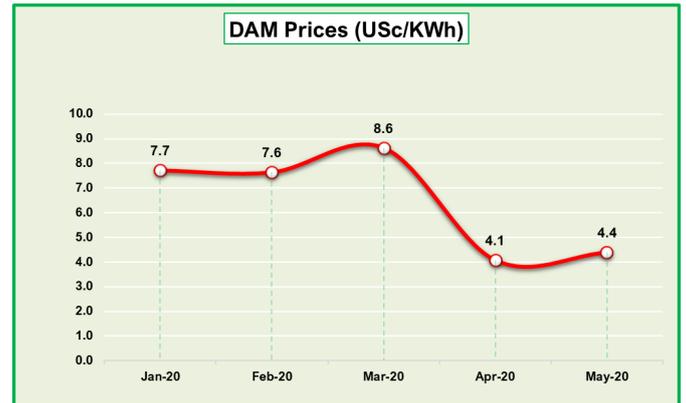
Non off-peak market clearing prices decreased from the April 2020 figure of 10.2USc/KWh to 9.6USc/KWh in May 2020. Off-Peak market clearing prices also decreased to 3USc/KWh in May 2020 from the April 2020 price of 5.3USc/KWh.

FPM Weekly Prices

The average market clearing price for the peak period was lower by 20% at 12.3USc/KWh in May 2020 from the April 2020 figure of 15.4USc/KWh. Standard period average market clearing prices decreased from the April 2020 figure of 7.1USc/KWh to 5.3USc/KWh in May 2020. The average off-peak market clearing price decreased from 3.4USc/KWh in April 2020 to 2.3USc/KWh in May 2020.

Day Ahead Market

The monthly average DAM market clearing price (MCP) was higher during the month of May 2020 at 4.4USc/KWh when compared to 4.1USc/KWh recorded in April 2020.



Monthly Average Market Clearing Prices from January to May 2020.

Intra Day Ahead Market (IDM)

The average IDM price for the peak period for the month of May 2020 was 6.3 USc/KWh, up from the April 2020 figure of 6.1 USc/KWh. The average IDM price for the standard period in May 2020 was 4.0 USc/KWh when compared to April 2020 figure of 3.6USc/KWh. The average off-peak period price recorded for May 2020 was the same as the April 2020 figure of 2.3USc/KWh.

Market Revenues

A total of **USD 5.4million** was exchanged on the competitive market during the month of May 2020 when compared to **USD 5.1million** exchanged in April 2020. The change is mainly attributed to changes in traded volumes and changes in prices. USD 7.6 million was exchanged on the competitive market during the month of May in 2019.

Environmental Corner

The Integrated Resource Planning for a Sustainable and Cleaner Africa

The SAPP participated in a virtual Integrated Resource Planning for a Sustainable & Cleaner Africa Energy Future webinar, at the invitation of ECA, the United Kingdom on 28 May 2020.



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The Forum brought together actors in renewable energy development around a central theme of integrated resource planning, against an uncertain future with so many competing needs. Oil price collapse, huge growth in renewables and demand, the need for sustainable development and push for an integrated system covering power, gas and water were some of the issues considered. Africa's policy and regulatory decisions will alter the path of Africa's Energy Infrastructure for decades to come. The tremendous demand for power at a time of low oil prices and the desire for sustainable energy development and integrated energy systems are in fierce competition.

The Webinar aimed to have a discussion that would inform policy, regulatory, utilities planning officials and consultants on the approaches to balance public policy and economics. It also provided information on the necessary tools and approaches to analyse the future state scenarios to integrated energy future.

The discussions revealed the following salient issues:

- Increased energy demand requires improved energy infrastructure amounting to US\$ 120 billion, with equal investment in generation and transmission.
- Africa's status is an endowment of abundant renewable energy resources against a huge energy shortage, coupled with poor infrastructure.
- Integrated Resource Planning (IRP) enables efficient and optimal resource utilisation
- Integrated Resource Planning is characterised by, among others: least cost and coordinated generation and transmission planning; approximated representation of demand curves; cross

border capacities and improved coordination among utilities.

- Renewable energy integration should address, but not limited to: secure system; back-up generation; and storage.
- Sub-Saharan gas demand prospects are forecasted to increase three-fold in the next decade which is a significant factor for electricity generation.
- IRP creates consensus among stakeholders; avoids costly investment mistakes; and reduces uncertainty in policy.
- IRP is a widely practised scenario-based planning method for electric utilities.
- Globalised levelized cost of electricity significantly reduced in recent years: 32% reduction for onshore wind; and 70% reduction for CSP. Renewable energy technologies are getting more cost competitive with fossils.
- IRP is necessary for transmission interconnectors, as it among others: aids in assessing imports and exports; assures IFIs of robustness of investments; establishing estimates of supply going forward, which informs policy making and tariff setting; identify least cost plan; when to invest and sequence of investments; and interconnection planning with neighbouring countries.
- "Plans are Worthless, but planning is Everything"

SADC PCB Elimination Project

The Project is currently compiling good practices records: three process so far are being recorded:

- (i) False positive tests – this is simply a methodological discussion.
- (ii) Effective Administration practices (without the laws yet).



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- (iii) Madagascar process of sampling during load shedding.

This is aimed at establishing the completeness of the Inventory process, and the utilities among other stakeholders have been engaged to submit the information by 25 May 2020.

Upcoming Events – 2020

DATE	EVENT
1 July 2020	43 rd SAPP CC Board Meeting, Virtual
1 – 3 September 2020	55th SAPP Meetings, Maseru, Lesotho
2 September 2020	44 th SAPP CC Board Meeting, Lesotho
Sept 2020	SADC Joint Energy and Water Ministers' Meetings, Tanzania
14 -18 Sept 2020	Power Africa Week, Johannesburg, South Africa
October 2020	SADC Energy Thematic Group Meeting, Gaborone, Botswana
20-22 October 2020	Africa Energy Forum, Amsterdam
29 October 2020	49 th SAPP Executive Committee Meeting and SAPP AGM, Kinshasa, DRC
27 November 2020	45 th SAPP CC Board Meeting, Harare, Zimbabwe



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