



October 2016

Promoting a Regional Competitive Electricity Market

October 2016 Highlights

(In comparison to September 2016)

| | |
|------------------------------|--------------------------|
| Total turnover (all markets) | ▲ +\$135,042.70 / +1.3% |
| Traded Volumes(All markets) | ▲ +21,908.4 MWh / +20% |
| DAM Traded Volumes | ▲ +12,391.40 MWh /+14.7% |
| FPM Monthly traded Volumes | ▲ +660 MWh / 9.7% |
| FPM Weekly traded Volumes | ▲ +1,199 MWh / +14.3% |
| IDM Traded Volumes | ▲ +7,658 MWh / +76.1% |

CONTENTS

| | |
|--|---|
| October 2016 Highlights..... | 1 |
| Participation Levels | 1 |
| Market Liquidity..... | 1 |
| Forward Physical Market Monthly (FPM-M)..... | 2 |
| Forward Physical Market Weekly (FPM-W)..... | 2 |
| Day Ahead Market (DAM) | 3 |
| Intra-day market (IDM) | 3 |
| Impact of Transmission Constraints..... | 4 |
| Market Clearing Prices | 5 |
| Revenue Performances | 6 |



Participation Levels

There were ten (10) active portfolios from nine (9) members during the month of October 2016 compared to the month of September 2016 in which there were twelve (12) active portfolios from nine (9) members.

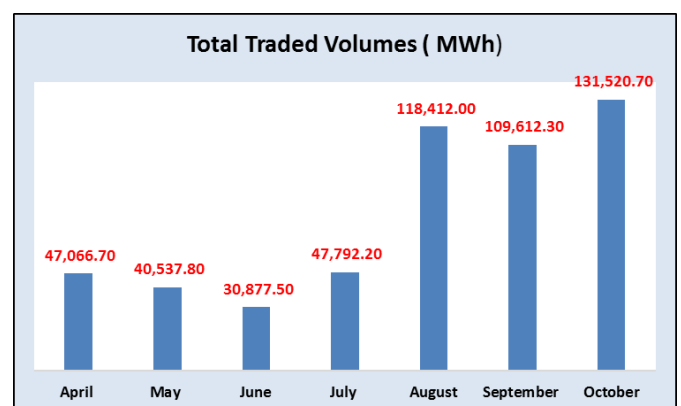
Market Liquidity

Trading in the competitive market was significantly higher during the month of October 2016 when compared to September 2016. Total traded volumes on the Day Ahead market (DAM), intra-day market (IDM), Forward Physical Market Monthly (FPM-M) and Forward Physical Market Weekly (FPM-W) increased by 20% to 131,520.7 MWh in the month of October 2016, from the September figure of 109,612.3 MWh. Below is the overview of volumes traded in DAM, IDM, FPM-M and FPM-W for the month of October 2016.

Fig 1.1: Traded Volumes in MWh in DAM, IDM, FPM-W and FPM-M for the month of October 2016.



Fig 1.2: Monthly Traded Volumes in MWh in DAM, IDM, FPM-W and FPM-M (April 2016 to October 2016)



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



Forward Physical Market Monthly (FPM-M)

Total traded volumes on Forward Physical Monthly Market (FPM-M) were marginally higher in October 2016 at **7,460 MWh**. This figure represents an increase of **9.7% or 660 MWh** from the September traded volumes of 6,800 MWh. The total energy that was matched in the month of October 2016 in the FPM-M decreased by 5.9% or **29,287 MWh** MWh to 207,887MWh from the September 2016 volume of 178,600 MWh.

Fig 2.1 FPM Monthly Market: Daily Traded Volumes for October 2016 (MWh)

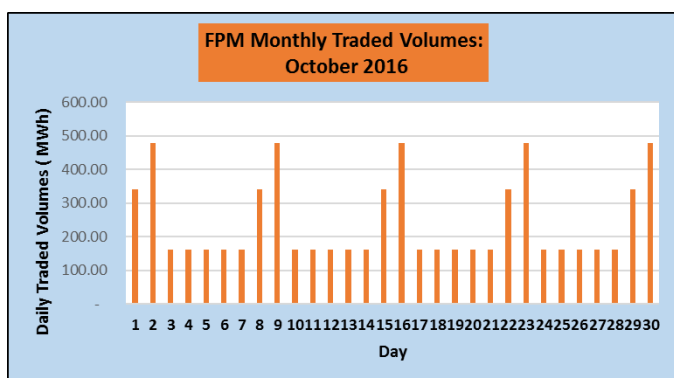
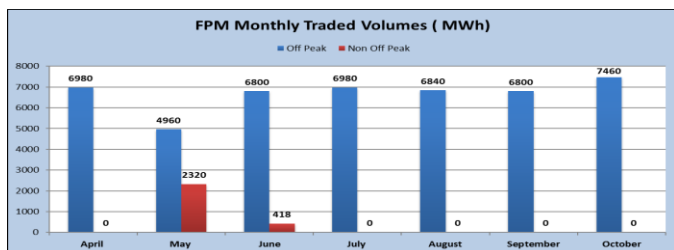


Fig 2.3 FPM Monthly Market: Traded Volumes(MWh) from April to October 2016 (MWh)



Forward Physical Market Weekly (FPM-W)

The total energy traded in FPM-W increased by **14.3% or 1,199MWh to 9,560MWh** in October 2016. In September 2016 the traded volumes in the FPM Weekly market were **8,361 MWh**. The total volumes matched in the FPM Weekly market also increased by 5,524.7 MWh or 5.5% to 105,466.1 MWh in October 2016 from 99,941.4 MWh in September 2016.

Fig 3.1 FPM Weekly Market: Daily Traded Volumes for October 2016 (MWh)

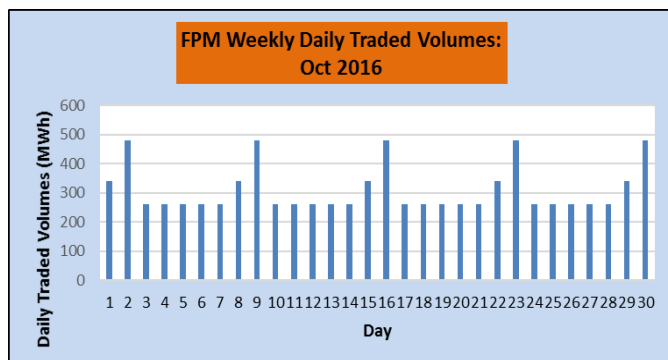
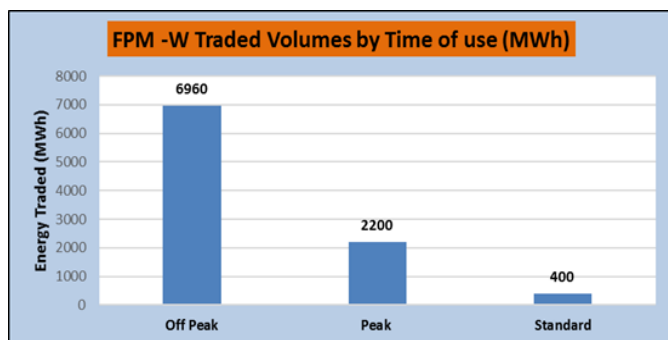
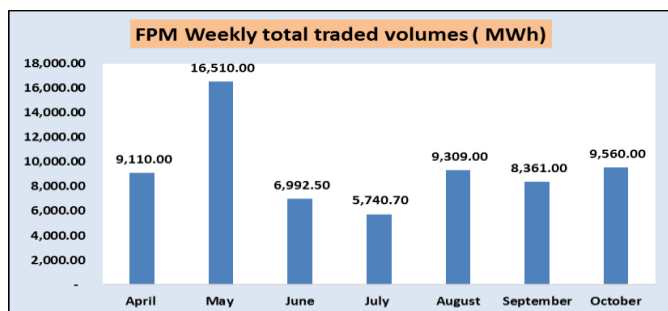


Fig 3.2 FPM Weekly Market: Traded Volumes by time of use for October 2016 (MWh)



As shown by the figure above, 72.8% of the total energy that was traded (9,560 MWh) was for the Off Peak period and the remainder was for the Peak (23%) and standard (4.2%) periods.

Fig 3.2 FPM Weekly Market: Traded Volumes (April 2016 to October 2016)



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 (DAM)

A total of **96,775.70 MWh** was traded in the Day Ahead Market (DAM) trading platform, registering a **14.7% increase** in traded volumes when compared to the September figure of 84,384.3 MWh. There were more sale offers than buy bids received in October 2016 in the DAM trading platform. A total of 521,247 Sale offers and a total of 468,523 MWh Buy bids were received in October 2016. There was an increase of 128,662 MWh or 32.8% in Sale offers received in October 2016 when compared to September sale bids of **392, 585 MWh**. There was a decline of 29,287 MWh or 5.9% in buy bids received in October 2016 when compared to September 2016 buy bids of 497,810MWh.

There was matching of bids in DAM for 31 days and 744 hours or 100% of the time during the month of October 2016. However, due to transmission constraints, trading occurred for 31 days and 737 hours or 99.06% of the time. In comparison to September 2016 where matching occurred for 30 days and 705 hours or 97.92% with trading occurring for 30 days and 702 hours or 97.5% of the time, this was a significant improvement.

Fig 4.1: Traded volumes in DAM by time of use for October 2016

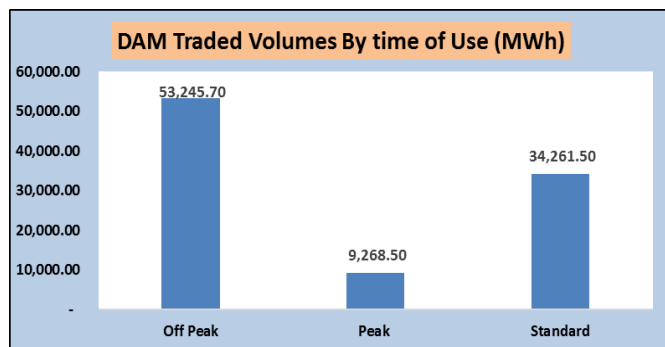
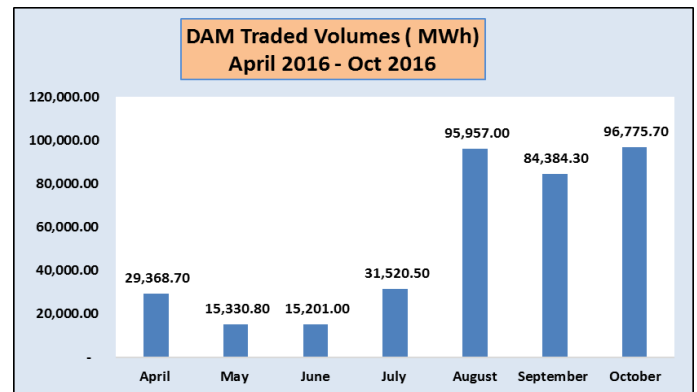


Fig 4.2: Total volumes traded in DAM (MWh) to date in 2016-17

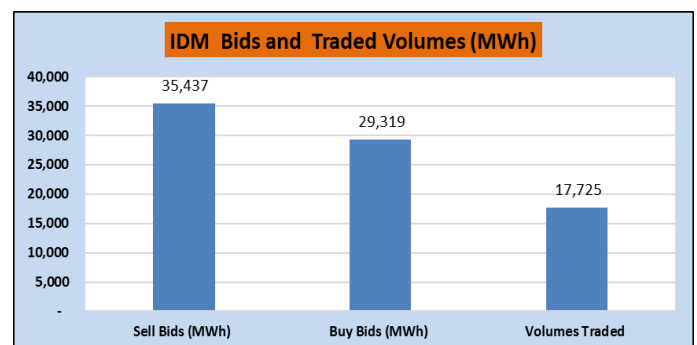


Intra-day market (IDM)

Trade in the IDM in October 2016 was significantly higher at 17,725 MWh which is an increase of 7,658 MWh or 76.1% from the September volume of 10,067 MWh.

Buy bids in IDM decreased by 39.2% from 48,201 MWh in September 2016 to 29,319 MWh in October 2016. Sale offers increased by 71.7% from 20,640 MWh in September to 35,437 MWh in October 2016.

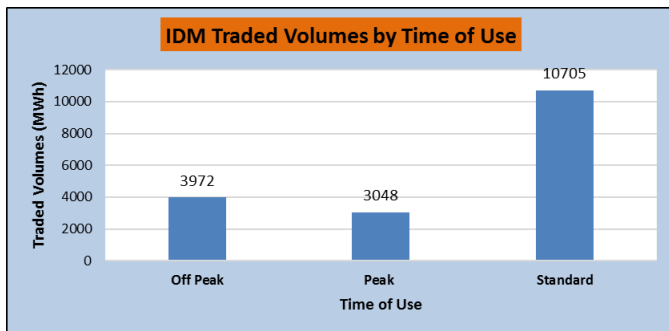
Fig 5.1: IDM Bids and Traded Volumes for October 2016 (MWh)



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

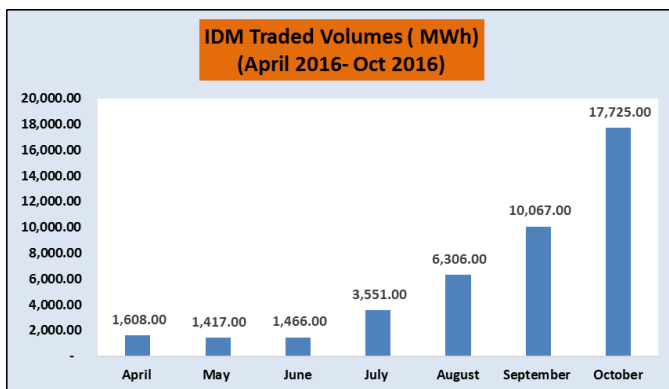


Fig 5.2: IDM Traded Volumes by time of use for October 2016 (MWh)



As shown by the figure above, 60.4% of the energy traded in IDM in October 2016 was for the Standard period whilst the remainder was for the Peak (17.2%) and Off Peak (22.4%) periods.

Fig 5.3: IDM Traded Volumes to date for 2016-17 (MWh)



Impact of Transmission Constraints

They were transmission constrains for the competitive market in the month of October, with only **46%** of the matched energy in DAM having been traded unlike the month of September where 50% of the energy that was matched in Dam was traded. In October 2016, 209,863.7 MWh was matched in DAM and 96,775.7 MWh was traded. In September on the other hand, 168,648.3 MWh was matched on the DAM trading platform and only 84,384.3MWh was traded.

Fig 5.1 Impact of Transmission Constraints on DAM Trading for the month of October 2016.

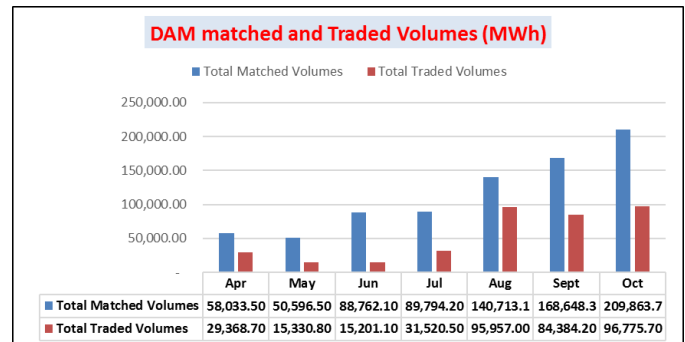
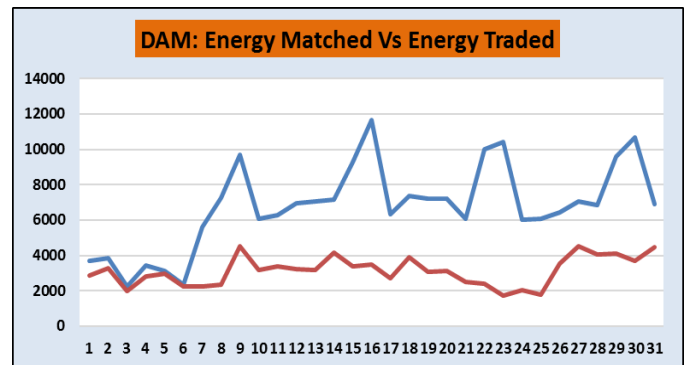


Fig 5.2 Energy matched and energy traded in DAM Trading platform for the month of October 2016.



As shown above was a significant difference between matched and traded volumes during the month of October 2016 as a result of increased transmission constraints for the competitive market.

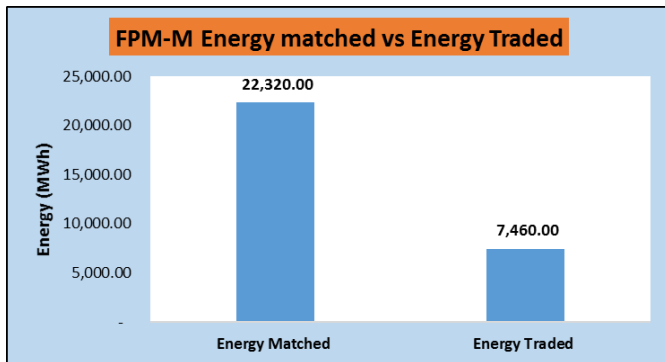
Energy matched but not traded in the FPM Monthly Market for the month of October 2016 was 14,860 MWh. During the month of October, 22,320 MWh had been matched, resulting in 66.6% of the matched energy failing to be traded. In September 96% of the total energy that was matched did not get traded.



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

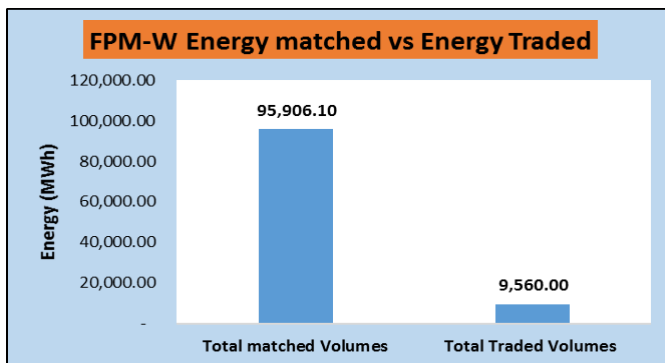


Fig 5.3: Energy Matched and energy traded in FPM Monthly Trading platform for the month of October 2016.



In the FPM Weekly market, 95,906.1 MWh was matched and 9,560 MWh was traded in October 2016. Consequently, 86,346.1 MWh (90% of matched volumes) was not traded.

Fig 5.3: Energy Matched and energy traded in FPM Weekly Trading platform for the month of October 2016.

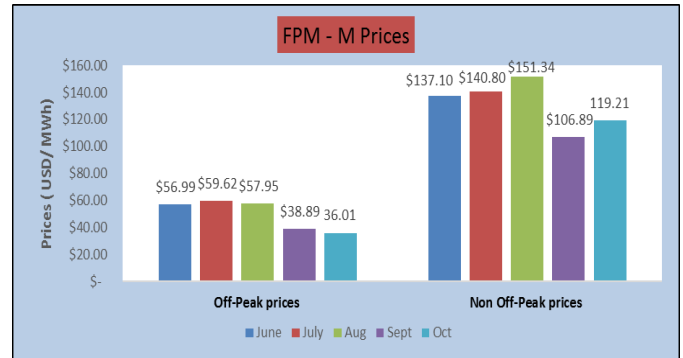


Market Clearing Prices

FPM Monthly Prices

Non off-peak prices increased by 11.5% from 10.689 USc/KWh in September 2016 to 11.921 USc/KWh in October 2016. Off Peak prices marginally declined by 7.4% from 3.889 USc/KWh in September 2016 to 3.601 USc/KWh in October 2016.

Fig 6.1 FPM-M prices by time of Use for the month of October 2016.



FPM Weekly Prices

The average price for the Peak period was slightly lower by 16.4% at 15.441USc/KWh in October 2016 from the September average peak price of 18.466 USc/KWh. Standard period average prices marginally decreased from the September average prices of 10.830 USc/KWh to 9.462 USc/KWh. The average Off-Peak price marginally decreased by 10% from 5.343 USc/KWh to 4.807 USc/KWh.

Fig 6.2 FPM-W Average prices for the Month of October 2016.

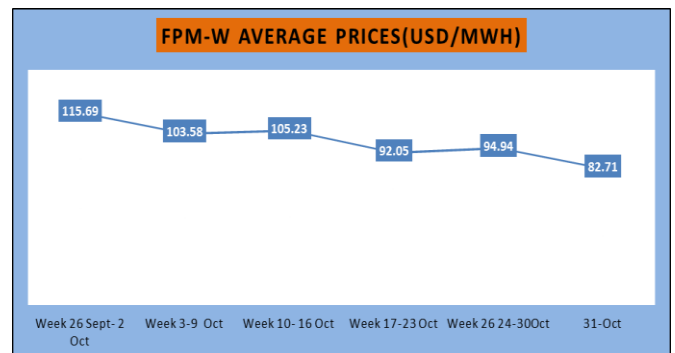
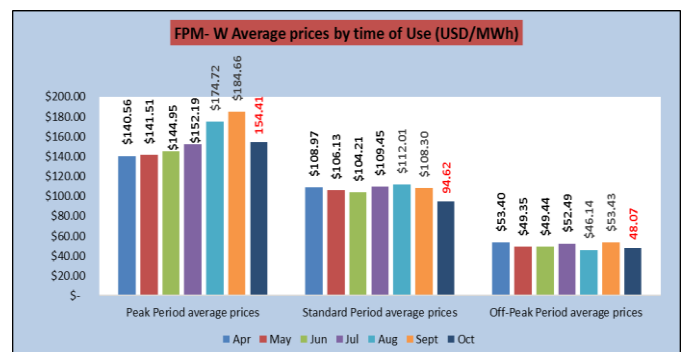


Fig 6.3 FPM-W average prices by time of use for the month of October 2016.



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 average monthly market clearing price (MCP) was slightly lower during the month of October 2016 at 6.305 USc/KWh when compared to the 9.165 USc/KWh recorded in September 2016. Below is a summary of the daily average MCPs for the month of October 2016.

Fig 6.4 Daily Average MCP prices for the month of October 2016.

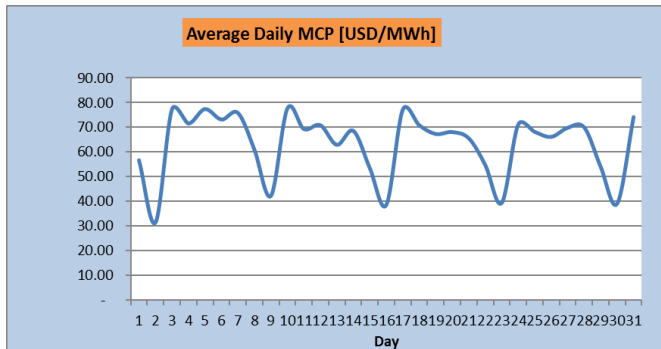
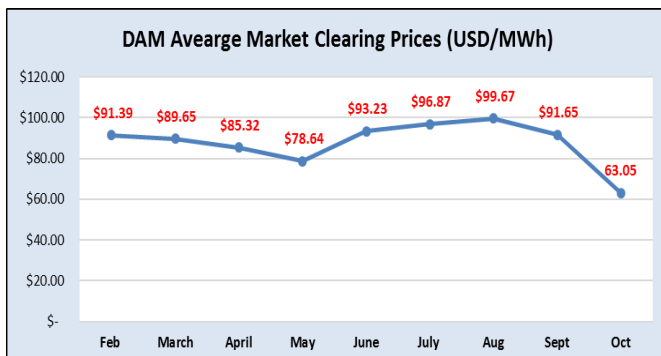


Fig 6.4 Daily Average MCP prices April 2016 to October 2016.



Revenue Performances

A total of **USD 10,290,241.62** was exchanged on the DAM, IDM, FPM-W and FPM-M market during the month of October 2016 when compared to a total of **USD 10,155,198.92** exchanged in September 2016. The Increase is mainly attributed to the increase in traded volumes.



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

