



November 2016

Promoting a Regional Competitive Electricity Market

November 2016 Highlights

(In comparison to October 2016)

Total turnover (all markets)	▲ +\$937,081.30 / +9.1%
Traded Volumes(All markets)	▲ +8,658 MWh / +6.6%
DAM Traded Volumes	▲ +14,259 MWh /+14.74%
FPM Monthly traded Volumes	▼ - 660 MWh / -8.8%
FPM Weekly traded Volumes	▼ -1,060 MWh / -11.1%
IDM Traded Volumes	▼ -4,579 MWh / -24.9%

CONTENTS

November 2016 Highlights	1
(In comparison to October 2016).....	1
Participation Levels	1
Market Liquidity	1
Forward Physical Market Monthly (FPM-M)	1
Forward Physical Weekly Market (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 twelve (12) active portfolios from eight (8) members during the month of November 2016 compared to the month of October 2016 where there were ten (10) active portfolios from nine (9) members.

Market Liquidity

Trading in the market was higher during the month of November 2016 when compared to October 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) markets increased by **6.6% to 140,179.2 MWh** in November 2016 from the October figure of 131,520.7 MWh. Below is the overview of volumes traded in DAM, IDM, FPM-M and FPM-W for the month of November 2016.

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

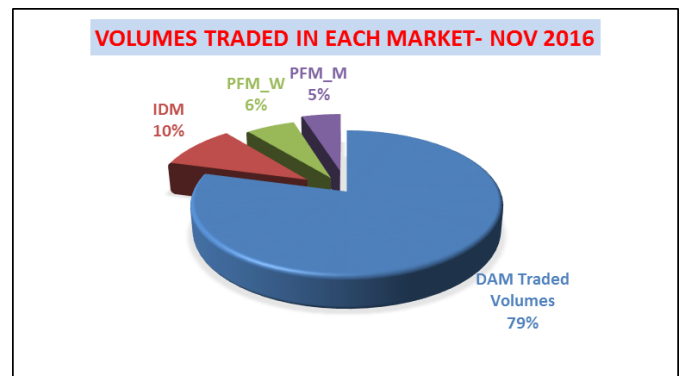
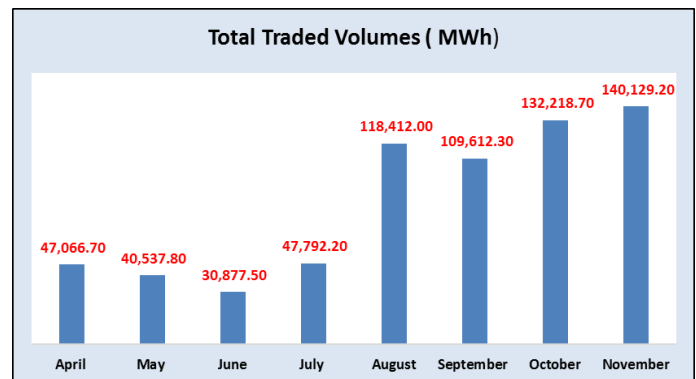


Fig 1.2: Total Monthly Traded Volumes in MWh in DAM, IDM, FPM-W and FPM-M (April 2016 to November 2016)



Forward Physical Market Monthly (FPM-M)

Total traded volumes on Forward Physical Monthly Market (FPM-M) were marginally lower in November 2016 at **6,800 MWh**. This figure represents a decline of **8.8% or 660 MWh** from the October traded volumes of 7,460 MWh. The total



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



energy matched in the month of November 2016 in FPM-M significantly increased by 653.2% or **145,792 MWh** to 168,112 MWh from the October 2016 volume of 22,320 MWh.

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

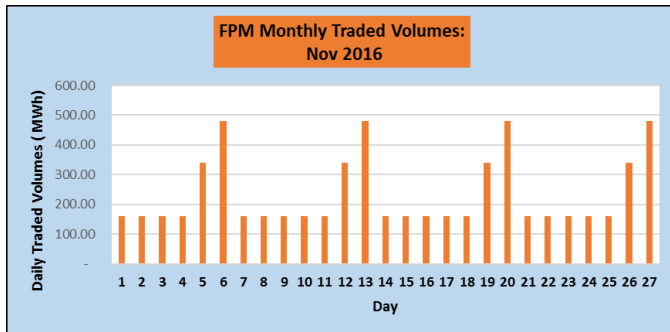
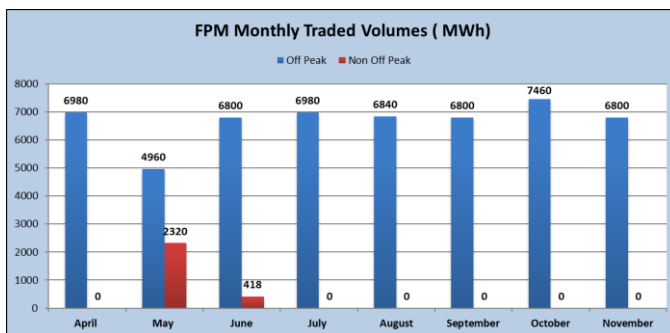


Fig 2.3 FPM Monthly Market: Traded Volumes(MWh) from April to November 2016 (MWh)



Forward Physical Weekly Market (FPM-W)

The total energy traded in FPM-W decreased by **11.1% or 1060MWh to 8,500MWh** in November 2016 compared to October 2016 where the traded volume was **9,560MWh**. The total volume matched in the FPM Weekly market also decreased by 19,890 MWh or 18.9% to 85,576 MWh in November 2016 from 105,466.1 MWh in October 2016.

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

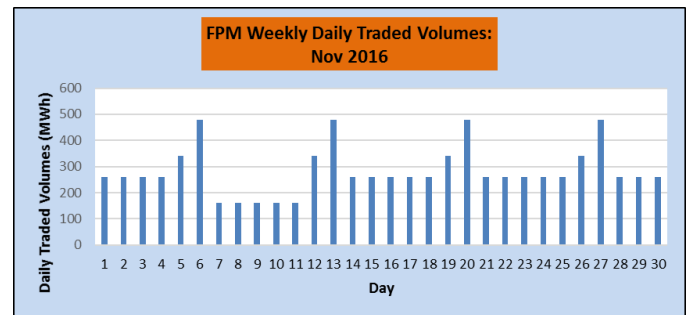
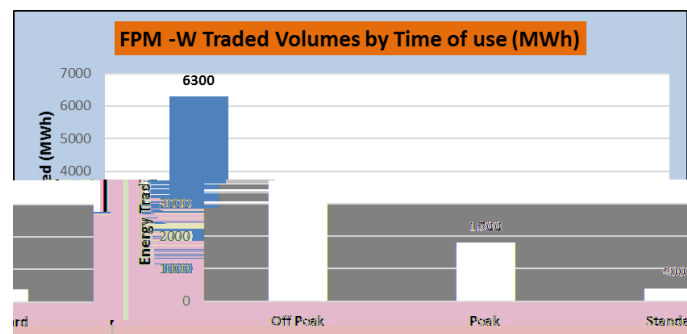
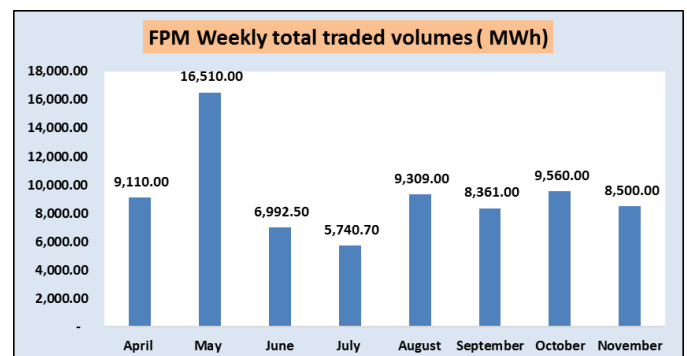


Fig 3.2 FPM Weekly Market: Traded Volumes by time of use for November 2016 (MWh)



74% of the total energy was traded during Off Peak period, 21% during Peak and 5% during standard time.

Fig 3.3 FPM Weekly Market: Traded Volumes (April 2016 to November 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 **111,035.2 MWh** was traded in the Day Ahead Market (DAM) trading platform, registering a **14.7% increase** in traded volumes when compared to the October figure of 96,775.70 MWh. There were more buy bids than sell offers received in November 2016 in the DAM trading platform. A total of 483,709 Sale offers and a total of 517,396 MWh Buy bids were received in November 2016. There was a decrease of 37,538 MWh or 7.2% in Sale offers received in November 2016 when compared to October sale bids of 521,247 MWh. There was an increase of 48,873 MWh or 10.4% in buy bids received in November 2016 when compared to October 2016 buy bids of 468,523MWh.

Matching of bids in DAM occurred for 30 days and 720 hours or 100% of the time during the month of November 2016. Trading also occurred for 30 days and 720 hours or 100% of the time. In comparison to October 2016 where matching occurred for 31 days and 744 hours or 100% with trading occurring for 31 days and 737 hours or 99.06% of the time.

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

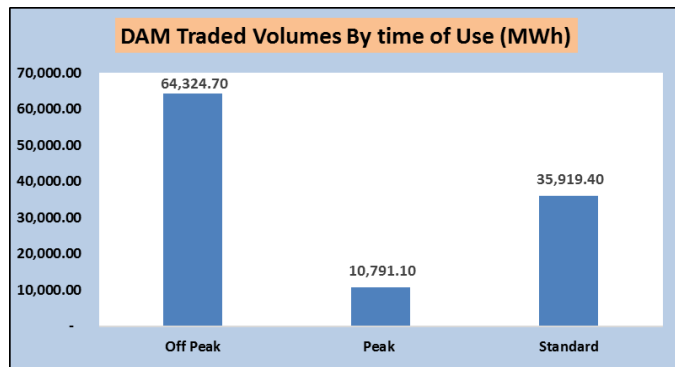
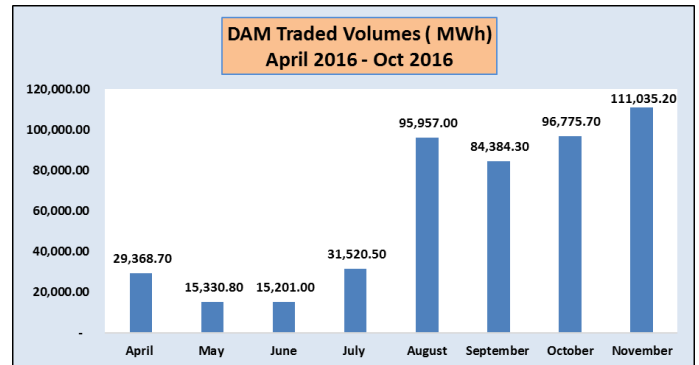


Fig 4.2: Total volumes traded in DAM (MWh) to date in 2016-17

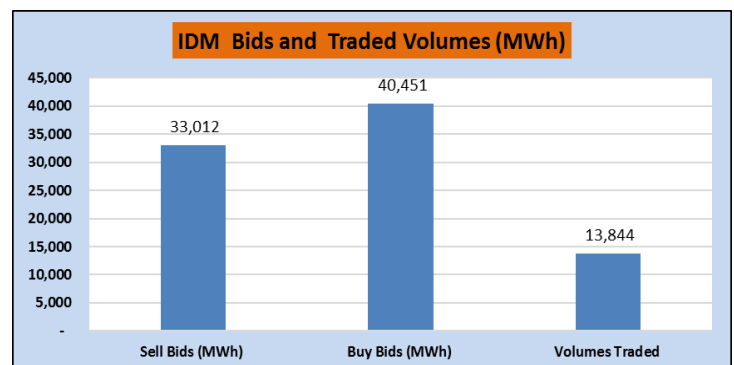


Intra-day market (IDM)

Trade in the IDM in November 2016 was lower when compared to October 2016. 13,844 MWh was traded in November 2016m which is a decline of 4,579 MWh or 24.9% from the October 2016 figure of 18,423 MWh.

Buy bids in IDM increased by 11,132MWh or 38% from 29,319 MWh recorded in October 2016 to 40,451 MWh in November 2016. Sale offers decreased by 6.8% from 35,437 MWh in October to 33,012 MWh in November 2016.

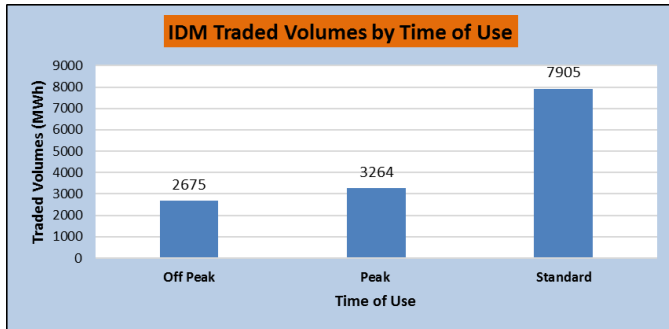
Fig 5.1: IDM Bids and Traded Volumes for November 2016 (MWh)



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

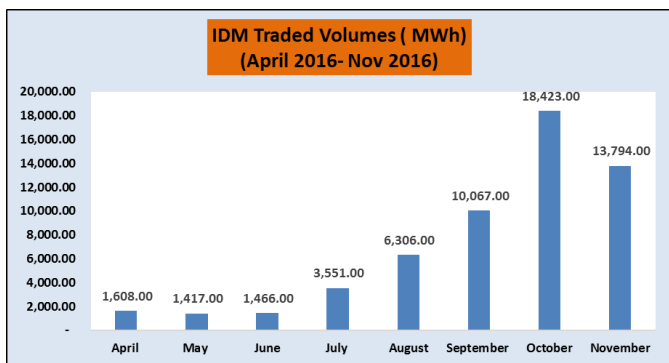


Fig 5.2: IDM Traded Volumes by time of use for November 2016 (MWh)



As shown by the figure above, 57% of the energy traded in IDM in November 2016 was for the Standard period whilst the remainder was for the Peak (24%) and Off Peak (19%) periods.

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



Impact of Transmission Constraints

Transmission constraints experienced on the competitive market in November 2016 were less when compared to October 2016 with **56%** of the matched energy in DAM being traded in November 2016 compared to **46%** traded in October 2016. In November 2016, 198, 973.7 MWh was matched in DAM and 111,035.20 MWh was traded compared to October 2016 where, 209,863.7 MWh was matched and 96,775.5 MWh was traded.

Fig 6.1 Impact of Transmission Constraints on DAM Trading for the month of November 2016.

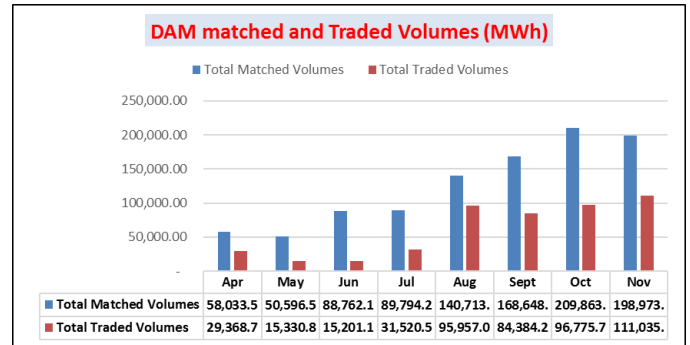
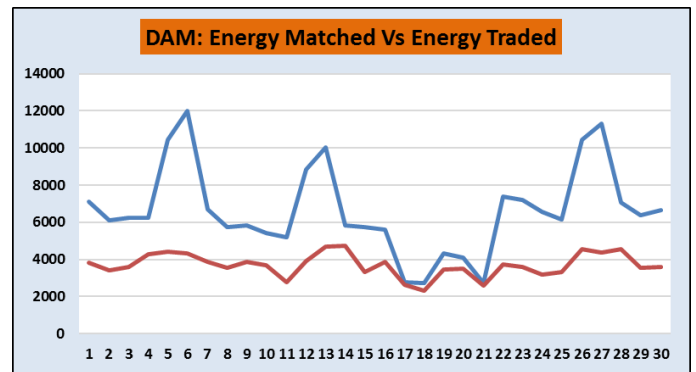
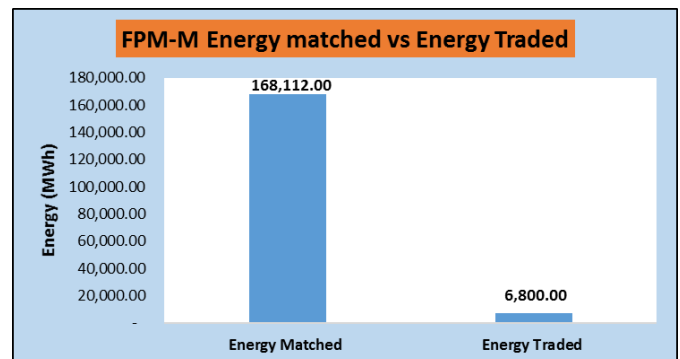


Fig 6.2 Energy matched and energy traded in DAM Trading platform for the month of November 2016.



Energy matched but not traded in the FPM Monthly Market for the month of November 2016 was 161,312 MWh or 95.96% of the matched volume compared to 66.6% recorded in October 2016.

Fig 6.3: Energy Matched and energy traded in FPM Monthly Trading platform for the month of November 2016.

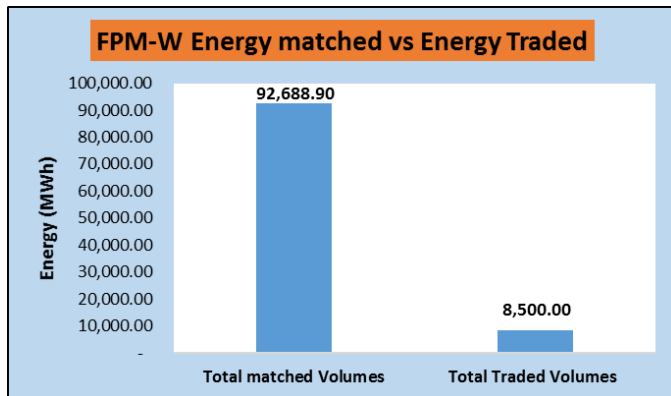


Southern African Power Pool (SAPP)
 24 Golden Stairs Road, P.O. Box EH52, Emerald Hill,
 Harare, Zimbabwe,
 Tel: +263-4-335517/335558 / 335468 Fax: +263-4-307023
 Email: info@sapp.co.zw Website: www.sapp.co.zw



On the FPM Weekly market, 85,576.1 MWh was matched with only 8,500MWh being traded in November 2016 resulting in 77,076.1 MWh or 90.1% of matched volumes failing to be traded as a result of transmission constraints.

Fig 6.4: Matched and Traded Energy in FPM Weekly Trading platform for the month of November 2016.

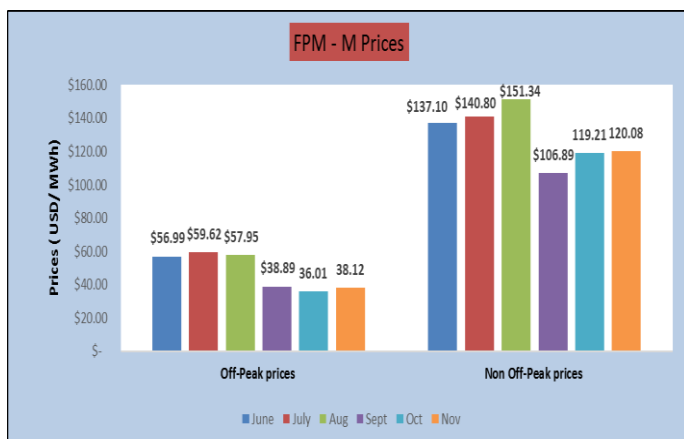


Market Clearing Prices

FPM Monthly Prices

Non off-peak prices increased by 0.7% from 11.921 USc/KWh in October 2016 to 12.008 USc/KWh in November 2016. Off Peak prices increased by 5.9% from 3.601 USc/KWh in October 2016 to 3.812 USc/KWh in November 2016.

Fig 7.1 FPM-M prices by time of Use for the month of November 2016.



FPM Weekly Prices

The average price for the Peak period was slightly lower by 17% at 12.818USc/KWh in November 2016 from the October figure of 15.441 USc/KWh. Standard period average prices marginally decreased from the October figure of 9.462 USc/KWh to 8.466 USc/KWh in November 2016. The average Off-Peak price also marginally decreased by 3.7% from 4.807 USc/KWh in October 2016 to 4.628 USc/KWh in November 2016.

Fig 7.2 FPM-W Average prices for the Month of November 2016.

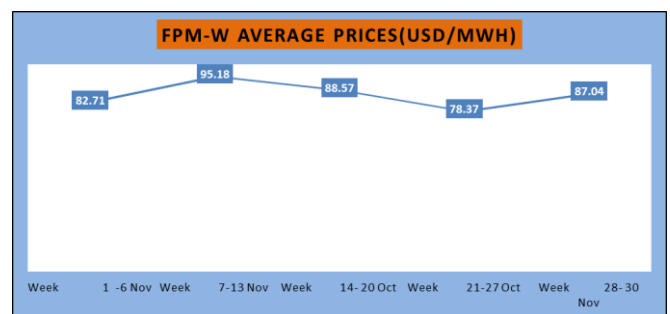
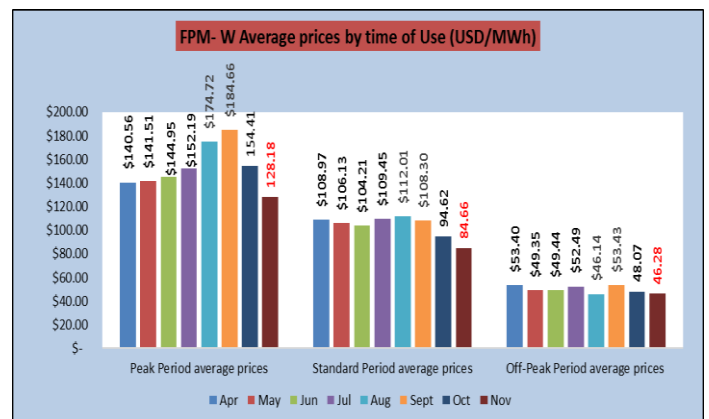


Fig 7.3 FPM-W average prices by time of use for the month of November 2016.



Day Ahead Market

The DAM average monthly market clearing price (MCP) was slightly higher during the month of November 2016 at 6.501 USc/KWh when compared to the 6.305 USc/KWh recorded in October 2016. Below is a summary of the daily average MCPs for the month of November 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



Fig 7.4 Daily Average MCP prices for the month of November 2016.

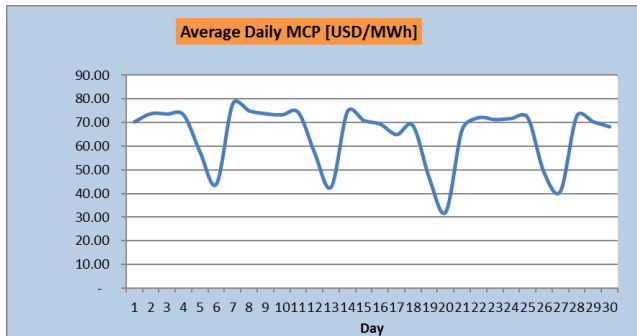
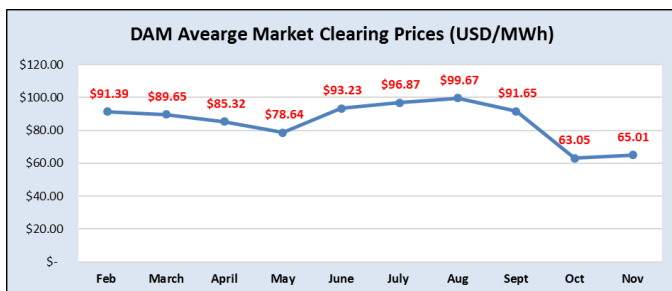


Fig 7.5 Daily Average MCP prices April 2016 to November 2016.



Revenue Performances

A total of **USD 11,227,322.92** was exchanged on the DAM, IDM, FPM-W and FPM-M markets during the month of November 2016 when compared to a total of **USD 10,290,241.62** exchanged in October 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

