



December 2016

Promoting a Regional Competitive Electricity Market

December 2016 Highlights

(In comparison to November 2016)

Total turnover (all markets)	▼ -\$3,826,177.61 / -34.01%
Traded Volumes(All markets)	▼ -28,582.5 MWh / -20.4%
DAM Traded Volumes	▼ -19,445 MWh / -17.5%
FPM Monthly traded Volumes	▲ + 340 MWh / +5%
FPM Weekly traded Volumes	▲ +485 MWh / +5.7%
IDM Traded Volumes	▼ -9,962 MWh / -72%

CONTENTS

December 2016 Highlights	1
(In comparison to November 2016)	1
Participation Levels	1
Market Liquidity	1
Forward Physical Market Monthly (FPM-M).....	2
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 eleven (11) active portfolios from eight (8) members during the month of December 2016. There was a marginal decrease when compared to the month of November 2016 where twelve (12) portfolios were active from eight (8) members.

Market Liquidity

Trading in the market was lower during the month of December 2016 when compared to November 2016. Total traded volume 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 20.4% to 111,596.7 MWh** in the month of December 2016 from the November figure of 140,179.2 MWh. Below is the overview of volumes traded in DAM, IDM, FPM-M and FPM-W for the month of December 2016.

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

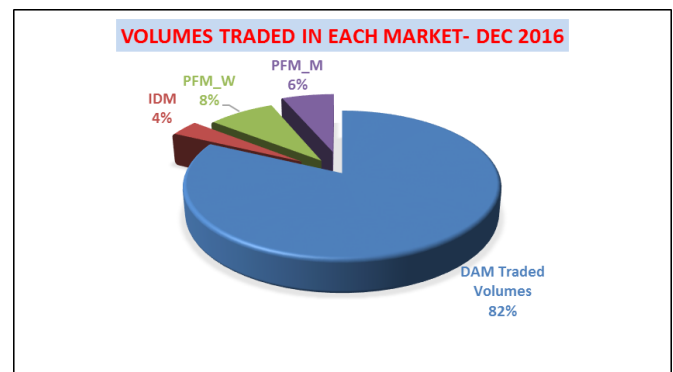
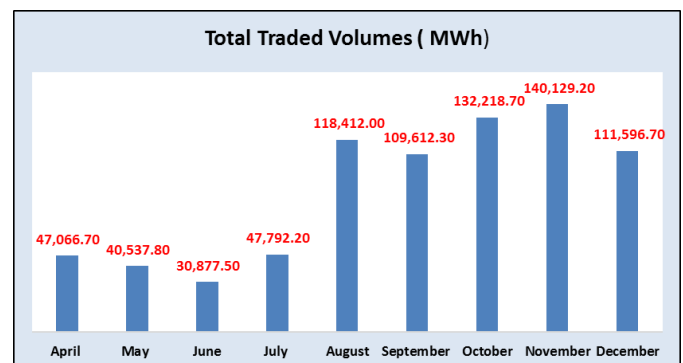


Fig 1.2: Total Monthly Traded Volumes in MWh in DAM, IDM, FPM-W and FPM-M (April 2016 to December 2016)



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Forward Physical Market Monthly (FPM-M)

Total traded volumes on Forward Physical Monthly Market (FPM-M) were marginally higher in December 2016 at **7,140MWh**. This figure represents an increase of **5% or 340 MWh** from the November traded volumes of 6,800 MWh. The total energy that was matched in the month of December 2016 in the FPM-M significantly decreased by 86.7% or 145,792 MWh to 22,320 MWh from the November 2016 volume of 168,112 MWh.

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

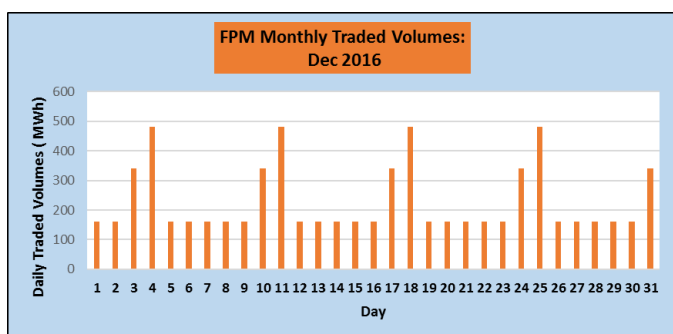
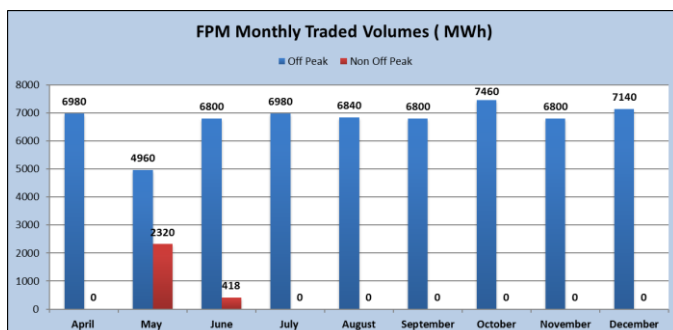


Fig 2.3 FPM Monthly Market: Traded Volumes (MWh) from April to December 2016 (MWh)



Forward Physical Weekly Market (FPM-W)

The total energy traded in FPM-W increased by **5.7% or 485MWh** to **8,985MWh** in December 2016. In November 2016 the traded volumes in the FPM Weekly market were **8,500MWh**. The total volumes matched in the FPM Weekly market decreased by 21,450.4 MWh or 25.1% to 64,125.7 MWh in December 2016 from 85,576.1 MWh in November 2016.

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

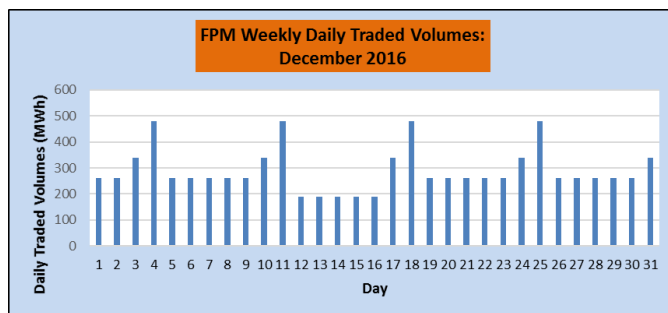
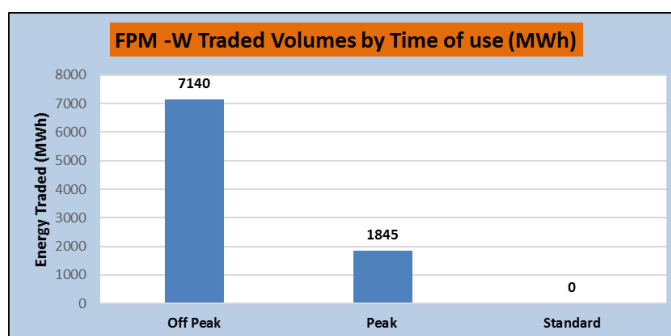
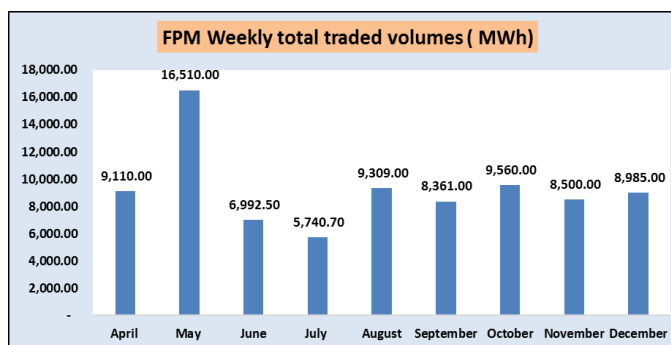


Fig 3.2 FPM Weekly Market: Traded Volumes by time of use for December 2016 (MWh)



79.5% of the total energy that was traded in FPM-W (8,985 MWh) was for the Off Peak period and the remainder was for the Peak (20.5%) period.

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



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Day Ahead Market (DAM)

A total of **91,589.7 MWh** was traded in the Day Ahead Market (DAM) trading platform, registering a **17.5% decrease** in traded volumes when compared to the November figure of **111,035.2 MWh**. There were more sale bids than buy offers received in December 2016 in the DAM trading platform. A total of 547,227 Sale offers and 332,067 MWh Buy bids were received in December 2016. There was an increase of 63,518 MWh or 13.1% in Sale offers received in December 2016 when compared to November sale bids of 483,709 MWh. There was a decrease of 185,329 MWh or 35.8% in buy bids received in December 2016 when compared to November 2016 buy bids of 517,396MWh.

There was matching of bids in DAM for 31 days and 733 hours or 98.52% of the time during the month of December 2016. Trading also occurred for 31 days and 733 hours or 98.52% of the time. In comparison to November 2016 where matching occurred for 30 days and 720 hours or 100% with trading occurring for 30 days and 720 hours or 100% of the time.

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

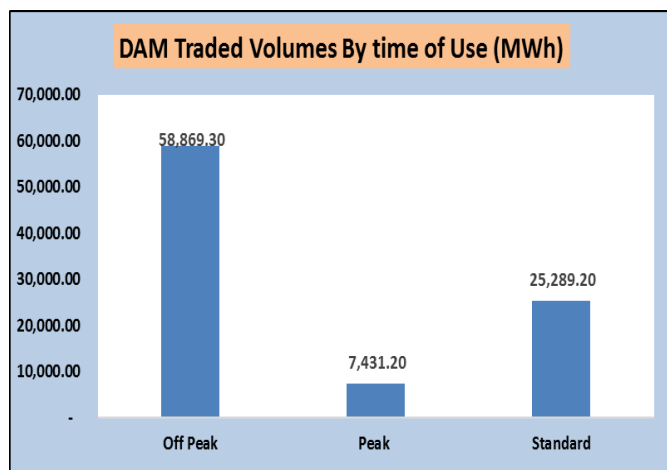
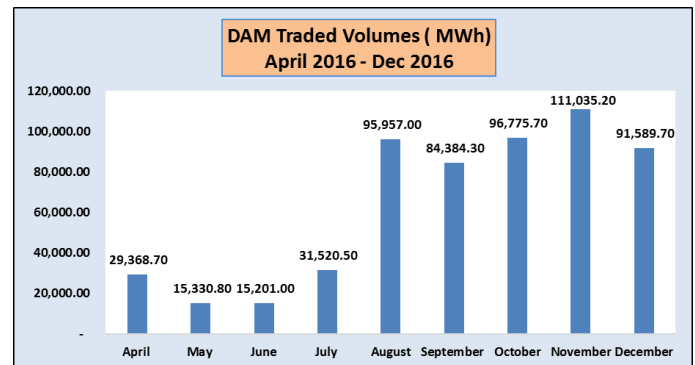


Fig 4.2: Total volumes traded in DAM (MWh) to date in 2016-17

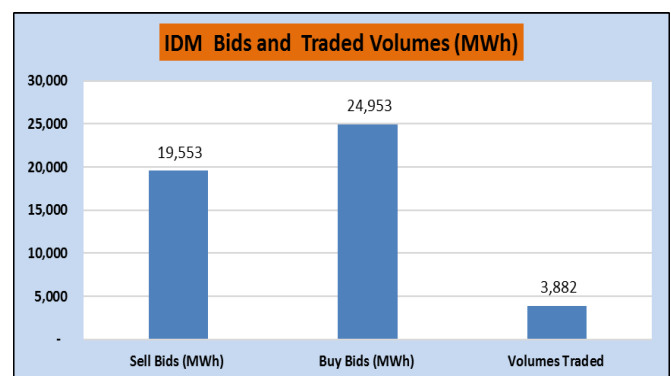


Intra-day market (IDM)

Trade in IDM in December 2016 was significantly lower when compared to November 2016 where traded volume was 3,882 MWh which is a decline of 9,962 MWh or 72% from the November figure of 13,844 MWh.

Buy bids in IDM decreased by 38.8% or 15,498MWh from 40,451 MWh in November 2016 to 24,953 MWh in December 2016. Sale offers also decreased by 40.8% from 33,012MWh in November to 19,553 MWh in December 2016.

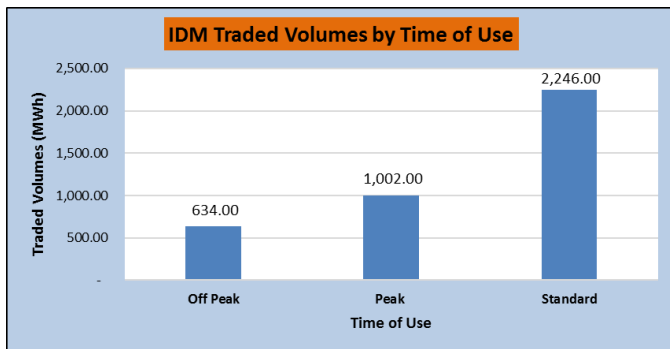
Fig 5.1: IDM Bids and Traded Volumes for December 2016 (MWh)



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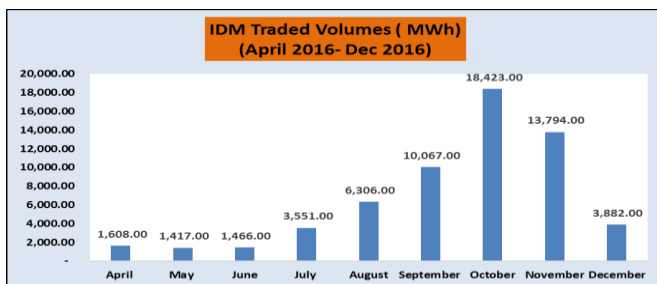


Fig 5.2: IDM Traded Volumes by time of use for December 2016 (MWh)



Note that 58% of the energy traded in IDM in December 2016 was for the Standard period whilst the remainder was for the Peak (26%) and Off Peak (16%) periods.

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



Impact of Transmission Constraints

They were transmission constraints for the competitive market in the month of December, with **67%** of the matched energy in DAM having been traded unlike the month of November where **56%** of the energy that was matched in DAM was traded. In December 2016, 136,416.2 MWh was matched in DAM and 91,589.7 MWh was traded. In November 2016 on the other hand, 198,973.7 MWh was matched on the DAM trading platform and 111,035 MWh was traded.

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

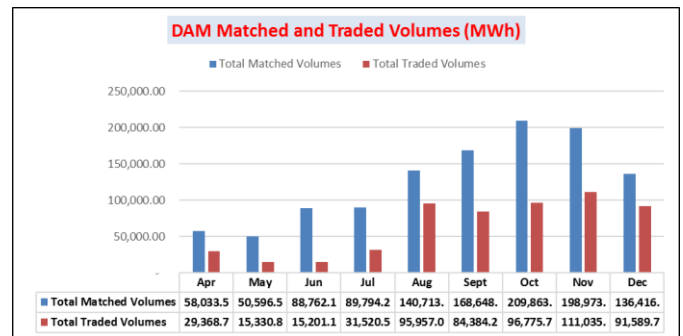
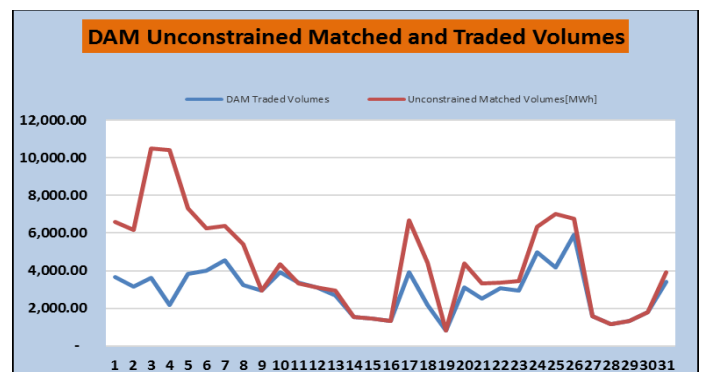


Fig 5.2 Energy matched and energy traded in DAM Trading platform for the month of November 2016.



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

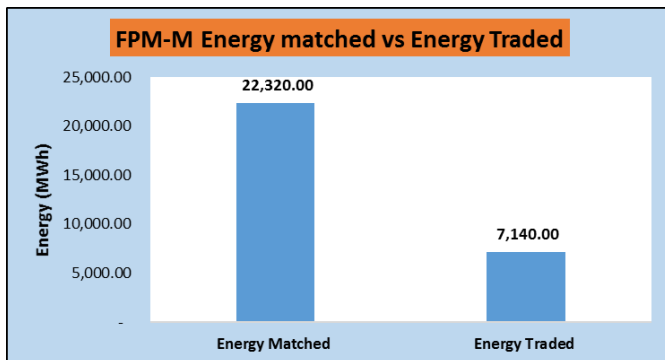
Energy matched but not traded in the FPM Monthly Market for the month of December 2016 was 15,180 MWh. During the month of December, 22,320 MWh had been matched, resulting in 68% of the matched energy failing to be traded. In November 95.96% of the total energy that was matched did not get traded.



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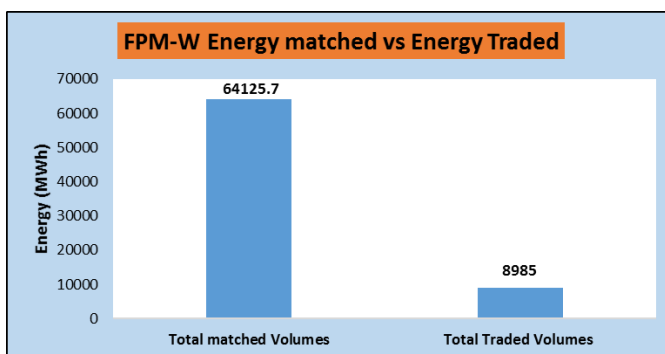


Fig 5.3: Energy Matched and Traded in FPM Monthly Trading platform for the month of December 2016.



In the FPM Weekly market, 64,125.7 MWh were matched with 8,985 MWh being traded in December 2016 and 55,104.7 MWh (86% of matched volumes) not traded.

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

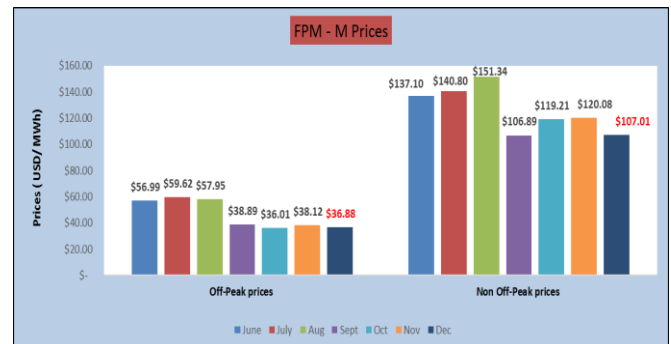


Market Clearing Prices

FPM Monthly Prices

Non off-peak prices decreased by 10.9% from 12.008 USc/KWh in November 2016 to 10.701 USc/KWh in December 2016. Off Peak prices also marginally decreased by 3.3% from 3.812 USc/KWh in November 2016 to 3.688 USc/KWh in December 2016.

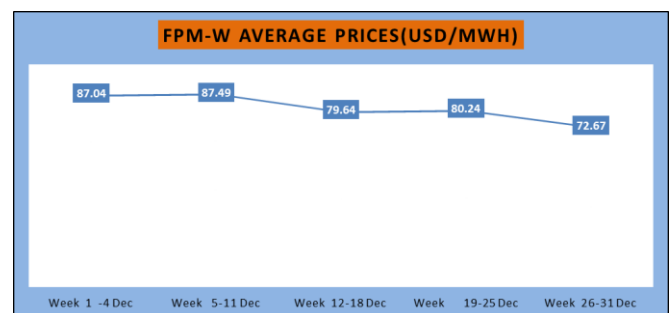
Fig 6.1 FPM-M prices by Time of Use for the month of November 2016.



FPM Weekly Prices

The average price for the Peak period was slightly lower by 7.2% at 11.89USc/KWh in December 2016 from the November 2016 average peak price of 12.818 USc/KWh. Standard period average prices marginally decreased from the November 2016 average prices of 8.466 USc/KWh to 8.141 USc/KWh. The average Off-Peak price also marginally decreased by 5.1% from 4.628 USc/KWh in November 2016 to 4.394 USc/KWh in December 2016.

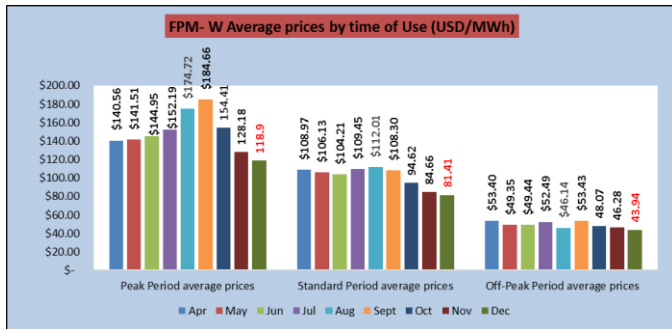
Fig 6.2 FPM-W Average prices for the Month of December 2016.



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Fig 6.3 FPM-W average prices by Time of Use for the month of December 2016.



Day Ahead Market

The average monthly market clearing price (MCP) in DAM was slightly lower during the month of December 2016 at 5.551 USc/KWh when compared to the 6.501 USc/KWh recorded in November 2016. Below is a summary of the daily average MCPs for the month of December 2016.

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

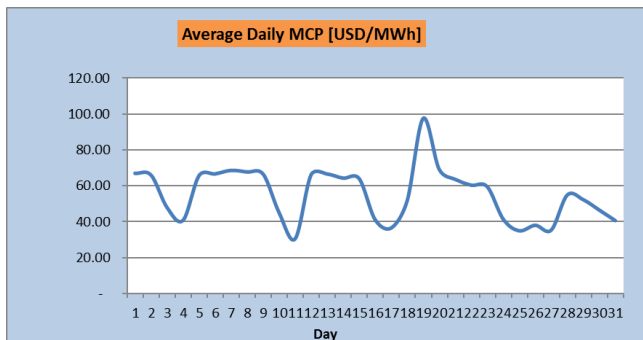
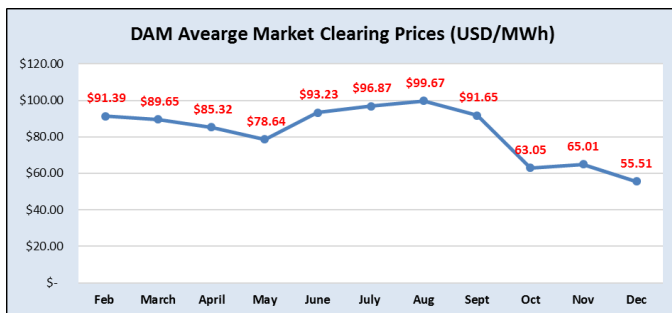


Fig 6.4 Daily Average MCP prices April 2016 to December 2016.



Revenue Performances

A total of **USD 7,401,145.31** was exchanged on the DAM, IDM, FPM-W and FPM-M markets during the month of December 2016 when compared to a total of **USD 11,227,322.92** exchanged in November 2016. The decrease is mainly attributed to the reduction in traded volumes and the reduction in market clearing prices in December 2016 when compared to November 2016.



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