AGGM Austrian Gas Grid Management AG

# Report on market area balancing activities in Austria 2018

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## List of abbreviations

| | |
|---|---|
| GTC | General Terms and Conditions |
| BE | Balancing energy |
| BG | Balance group |
| BGR | Balance group representative |
| BGC | Balance group coordinator |
| CF | Carry-forward account |
| TS | Transmission system |
| GWG | Gaswirtschaftsgesetz, the Austrian Natural Gas Act |
| MA | Market area |
| MAM | Market area manager |
| TSO | Transmission system operator |
| DA | Distribution area |
| DAM | Distribution area manager |
| VTP | Virtual trading point |

# 1 Introduction

In the Austrian market model, AGGM Austrian Gas Grid Management AG (AGGM) operates both as Market Area Manager and Distribution Area Manager (MAM and DAM) and is responsible for balancing activities in the Austrian gas grid.

Ex-ante and ex-post balancing are essential elements of the Austrian Balance Group (BG) structure and provide for measures to ensure balanced entry and exit quantities, keeping the transmission system within its operational limits. The balancing rules underlying the model provide the framework for all parties involved, with, the balance group representatives (BGR) being responsible for maintaining a balanced energy portfolio. In the course of the ex-ante balancing, the MAM compares the allocated entry and exit capacities for each BG based on nominations and informs the BGR of any imbalances. If the BGR itself does not take any action to restore balance, the MAM calls off capacities at the gas exchange on behalf and on the account of the BGR. Ex-post balancing of the distribution area is performed by comparing the forecasted and the actual system exit and entry. In its role as DAM, AGGM procures physical balancing energy (BE), if necessary, at the gas exchange of the virtual trading point (VTP) in order to ensure system stability in the distribution area (DA). For that purpose, AGGM buys and sells balancing energy at market prices on behalf and on the account of the balance group coordinator (BGC).

In addition, as part of managing balancing energy, the MAM AGGM is responsible for collecting balancing incentive markups when the appropriate conditions are met. Avoiding those markups serves as an incentive for BGRs to consistently make balanced injection and withdrawal nominations for each BG. The MAM can at the same time use those balancing incentive markups to cover the procurement of balancing energy for the market area and the related costs incurred by any intraday balancing required.

The following report has been prepared in line with the objective of achieving the utmost transparency in matters relating to balancing incentive markups and any balancing measures. This balancing report examines balancing activity in the 2018 calendar year and presents comparisons with previous years to show current developments.

The second section outlines the legal background to balancing in Austria. The third section presents the physical balancing activities carried out in the distribution area and in the transmission system (TS). The fourth section describes developments in relation to balancing incentive markups. The report concludes with a summary of the key insights from this year's balancing report.

# 2 Legal background

## 2.1 Balancing

The following documents provide the legal framework for balancing of the Austrian grids by the MAM and DAM:

- Balancing Network Code
  Regulation (EU) No. 312/2014 of the Commission establishing a Network Code on Gas Balancing of Transmission Networks
- The Austrian Natural Gas Act 2011 (*Gaswirtschaftsgesetz, GWG*)
  Federal Act adopting new rules for the gas market, Federal Law Gazette 107/2011 as amended
- Gas Market Model Ordinance 2012 (*Gas-Marktmodell-Verordnung*)
  Energie-Control Austria Executive Board Ordinance on Provisions for the Gas Market Model, Federal Law Gazette II no. 171/2012 as amended
- GTC MAM-DAM-BGR East
  General terms and conditions of the Market Area Manager and Distribution Area Manager governing the legal relationships between (i) the MAM and the BGRs, on the one hand, and (ii) the DAM and the BGRs, on the other hand, in the MA East, Version 01
- GTC DAM-BGR TYROL & VORARLBERG
  General terms and conditions of the Distribution Area Manager governing the legal relationship between the DAM and the BGRs in the Tyrol and Vorarlberg market areas, version 03

## 2.2 Balancing incentive markups

The following documents provide the legal framework for calculating balancing incentive markups for unbalanced BG positions:

- Balancing Network Code
  Regulation (EU) No. 312/2014 of the Commission establishing a Network Code on Gas Balancing of Transmission Networks
- Gas Market Model Ordinance 2012 (*Gas-Marktmodell-Verordnung*)
  Energie-Control Austria Executive Board Ordinance on Provisions for the Gas Market Model, Federal Law Gazette II no. 171/2012 as amended
- GTC MAM-DAM-BGR East
  General terms and conditions of the Market Area Manager and Distribution Area Manager governing the legal relationships between (i) the MAM and the BGRs, on the one hand, and (ii) the DAM and the BGRs, on the other hand, in the MA East, Version 01

# 3 Balancing activities

In its role as MAM and DAM, AGGM ensures the continuous supply of gas in Austria. Irrespective of this, it is the responsibility of the BGRs to ensure that their entries and exits are physically balanced. If linepack in the gas grid (internal balancing or control energy) is insufficient, AGGM takes physical balancing actions in the course of its gas flow control activities. As said above, AGGM takes balancing activities by purchasing or selling balancing energy for the distribution area and by purchasing or selling capacities in order to balance BG positions.

## 3.1 Balancing in the market area

In 2018, no balancing energy was required to be called off to ensure system stability or intraday balancing of the transmission system.

However, the MAM made the following call-offs at the VTP to compensate for intraday imbalances of BGs on behalf and on the account of the BGRs: The table shows the quantities called off, the number of call-offs per month and the total of BGs called off per day (note that BGs can be affected multiple times per month). Where multiple trades were carried out for the purposes of one call-off, only one transaction is recorded.

| Month | Quantity called-off (MWh) | MAM trades (number) | Total of BGs called off per day (number) |
|---|---|---|---|
| January | 30,431 | 65 | 63 |
| February | 45,692 | 63 | 56 |
| March | 53,462 | 88 | 80 |
| April | 3,587 | 53 | 47 |
| May | 29,631 | 62 | 58 |
| June | 10,032 | 42 | 39 |
| July | 4,582 | 37 | 34 |
| August | 28,663 | 70 | 62 |
| September | 23,714 | 57 | 53 |
| October | 26,249 | 81 | 77 |
| November | 1,430 | 57 | 56 |
| December | 34,902 | 106 | 99 |
| **Total** | **292,375** | **781** | **724** |

*Table 1: Balancing actions in the MA*

These figures are also available online on a daily basis on AGGM platform under “Publication” and are published each month retrospectively.

Comparison with previous years (Fig. 1) shows that the number of call-offs is growing, but that, with the exception of 2015, quantities have remained steady. It would appear that BGRs are increasingly using balancing by the MAM as a “service”.

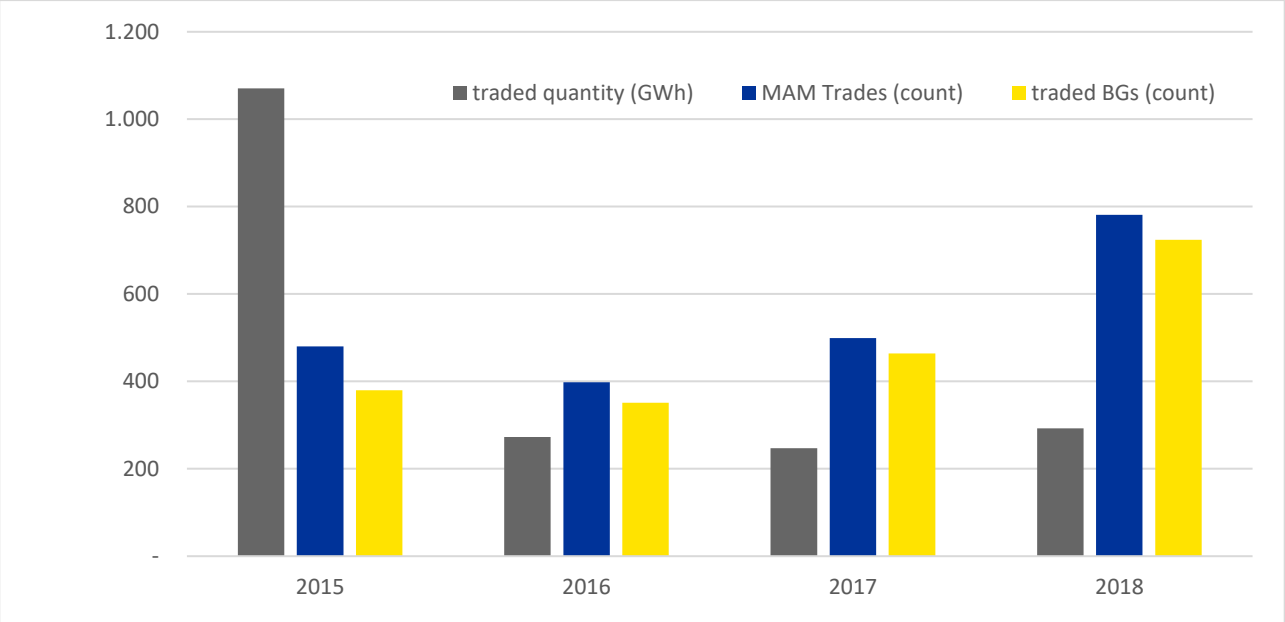


*Figure 1: Comparison of balancing actions in the MA East, 2015-2018*

## 3.2 Balancing activities in the distribution area

In order to maintain system stability, the following balancing energy capacities (in MWh) were procured at the gas exchange of the VTP for the DA in 2018: Table 2 shows BE capacities bought and sold for the Eastern distribution area and the Tyrol and Vorarlberg market areas. The high figures in the winter months are due to the cold spell in late February / early March.

| Month | Eastern DA | | Tyrol & Vorarlberg MAs | |
|---|---|---|---|---|
| **2018** | **BE buy** | **BE sell** | **BE buy** | **BE sell** |
| January | 157,395 | 0 | 8,355 | 5,390 |
| February | 90,144 | 67,760 | 20,235 | 19,559 |
| March | 50,608 | 132,955 | 6,319 | 16,570 |
| April | 62,547 | 34,736 | 3,710 | 3,820 |
| May | 4,200 | 69,435 | 1,010 | 2,564 |
| June | 22,753 | 11,770 | 3,320 | 0 |
| July | 0 | 43,830 | 850 | 190 |
| August | 27,338 | 10,757 | 4,370 | 0 |
| September | 68,310 | 2,800 | 3,270 | 0 |
| October | 46,404 | 18,216 | 10,134 | 4,048 |
| November | 27,546 | 152,517 | 480 | 7,040 |
| December | 52,973 | 46,580 | 20,458 | 20,596 |
| **Total** | **610,218** | **591,356** | **82,511** | **79,777** |

*Table 2: Balancing actions DA*

Figure 2 compares procurement of balancing energy in the years 2015-2018. In general, fluctuations are due to seasonal temperature variations and corresponding market signals. This is probably also true of the significant peak in January 2017.

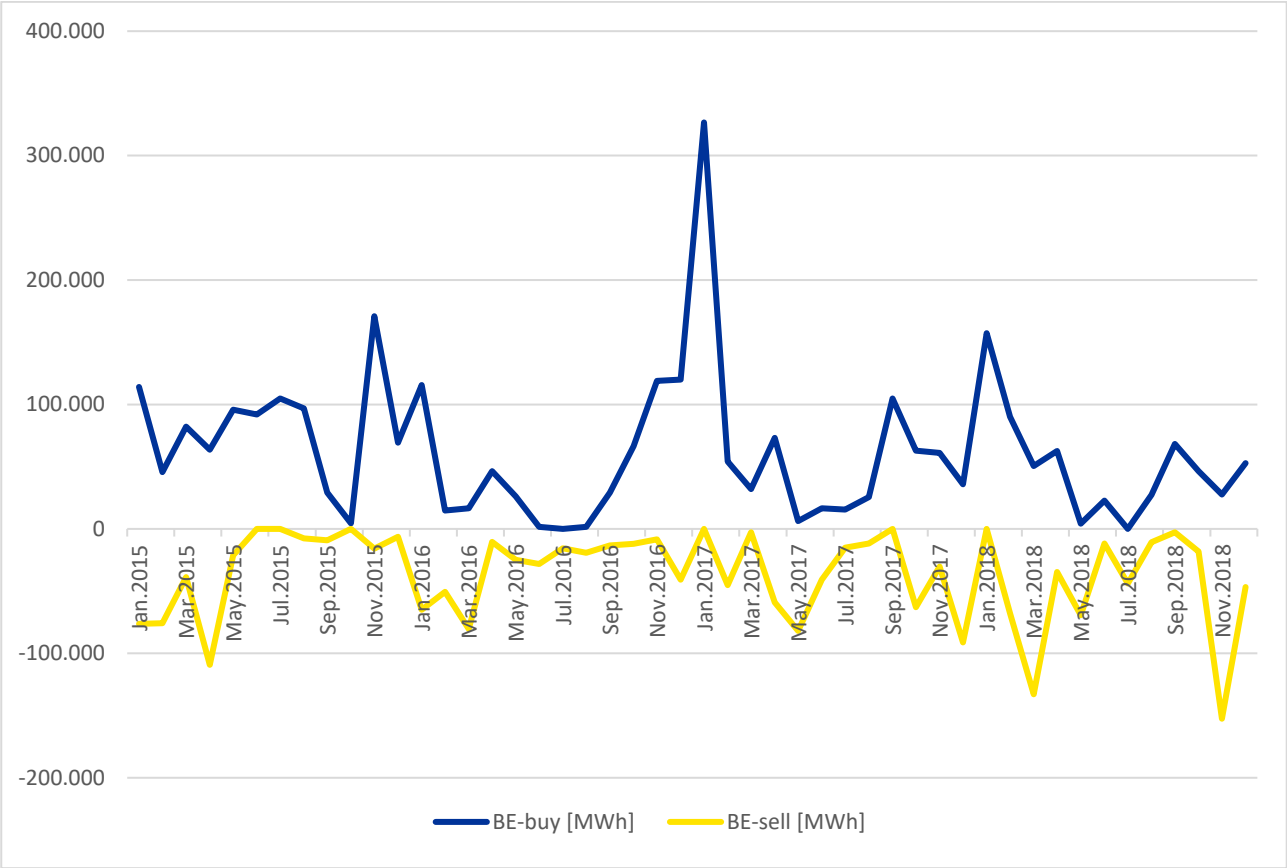


*Figure 2: Comparison of balancing actions in the distribution area, 2015-2018*

The following prices (in EUR/MWh) were applied for these call-offs in 2018 in the Eastern distribution area and the Tyrol and Vorarlberg market areas (Table 3). As shown above, the high purchase prices for BE at the NCG VTP and on the CEGH were due to the impacts of the cold spell.

| Month | Eastern DA | | | | | Tyrol & Vorarlberg MAs | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Maximum purch. price | Avg. purch. price | Avg. price w/o call-off | Avg. selling price | Minimum selling price | Maximum purch. price | Avg. purch. price | Avg. price w/o call-off | Avg. selling price | Minimum selling price |
| January | 20,491 | 19,205 | 18,662 | No call-off | No call-off | 20,082 | 19,102 | 18,575 | 18,908 | 17,780 |
| February | 36,112 | 27,634 | 20,070 | 17,041 | 17,041 | 45,947 | 25,881 | 18,829 | 21,101 | 17,013 |
| March | 70,000 | 42,375 | 23,901 | 17,804 | 17,804 | 61,863 | 41,228 | 22,245 | 24,048 | 16,125 |
| April | 21,408 | 20,075 | 19,807 | 19,569 | 19,569 | 21,950 | 20,197 | 19,536 | 18,849 | 16,581 |
| May | 22,750 | 22,688 | 21,751 | 19,952 | 19,952 | 22,328 | 22,119 | 21,633 | 20,548 | 19,425 |
| June | 23,500 | 23,064 | 22,377 | 21,350 | 21,350 | 22,375 | 22,087 | 21,972 | No call-off | No call-off |
| July | No call-off | No call-off | 22,932 | 22,000 | 22,000 | 22,375 | 22,303 | 22,254 | 22,200 | 22,200 |
| August | 26,275 | 25,633 | 24,349 | 22,000 | 22,000 | 26,400 | 23,655 | 23,669 | No call-off | No call-off |
| September | 30,384 | 28,687 | 28,034 | 26,825 | 26,825 | 30,000 | 27,339 | 27,738 | No call-off | No call-off |
| October | 27,222 | 26,560 | 26,425 | 23,990 | 23,990 | 28,400 | 26,579 | 26,156 | 24,981 | 23,775 |
| November | 25,716 | 24,960 | 24,515 | 22,900 | 22,900 | 27,175 | 27,175 | 24,851 | 24,719 | 22,915 |
| December | 25,298 | 23,994 | 24,023 | 22,775 | 22,775 | 27,353 | 25,110 | 23,997 | 23,678 | 20,954 |

*Table 3: Balancing energy procurement prices*

Figures 3 and 4 compare purchase prices for BE in MA East and the market areas in the west for the years 2015-2018. As shown, the prices over recent years were subject to minimal fluctuation within the normal range. The only exception to this was the period of cold weather in February/March 2018 and the subsequent weeks. During this period, market prices rose abruptly and significantly, sometimes over periods of a few hours.

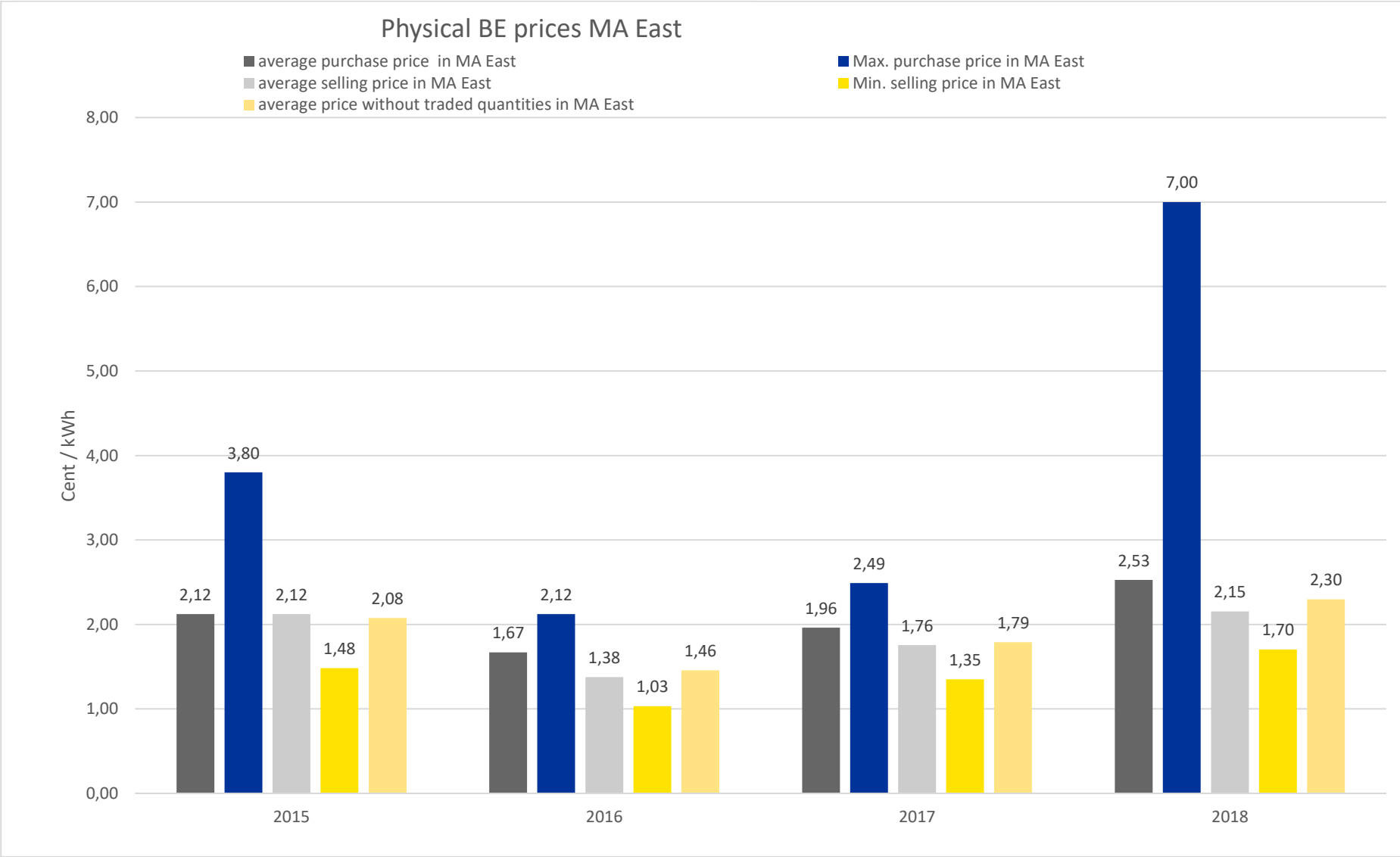


*Figure 3: Comparison of BE procurement prices in the MA East, 2015-2018*

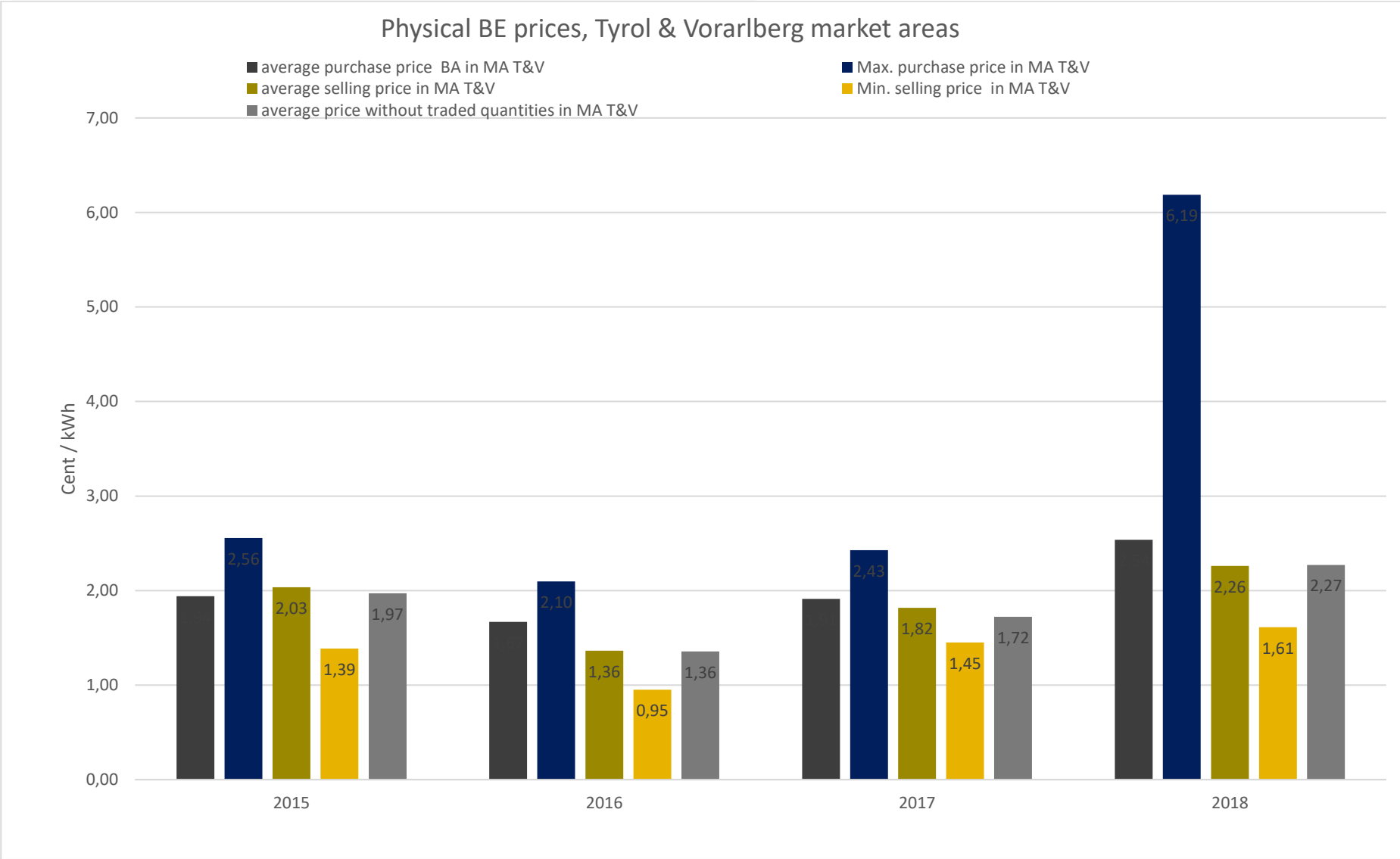


*Figure 4: Comparison of BE procurement prices, Western market area, 2015-2018*

# 4 Balancing incentive markups

The method of balancing incentive markups implemented in the MA East of Austria is an incentive mechanism for BGRs to submit balanced nominations. Balancing incentive markups are payable if there are hourly imbalances and if further parameters are met.

## 4.1 Method for balancing incentive markups in 2018

The following chart illustrates the method of balancing incentive markups, blue boxes indicate that BG imbalances are not charged (see GTC MAM-DAM-BGR East, Article 20 as amended).

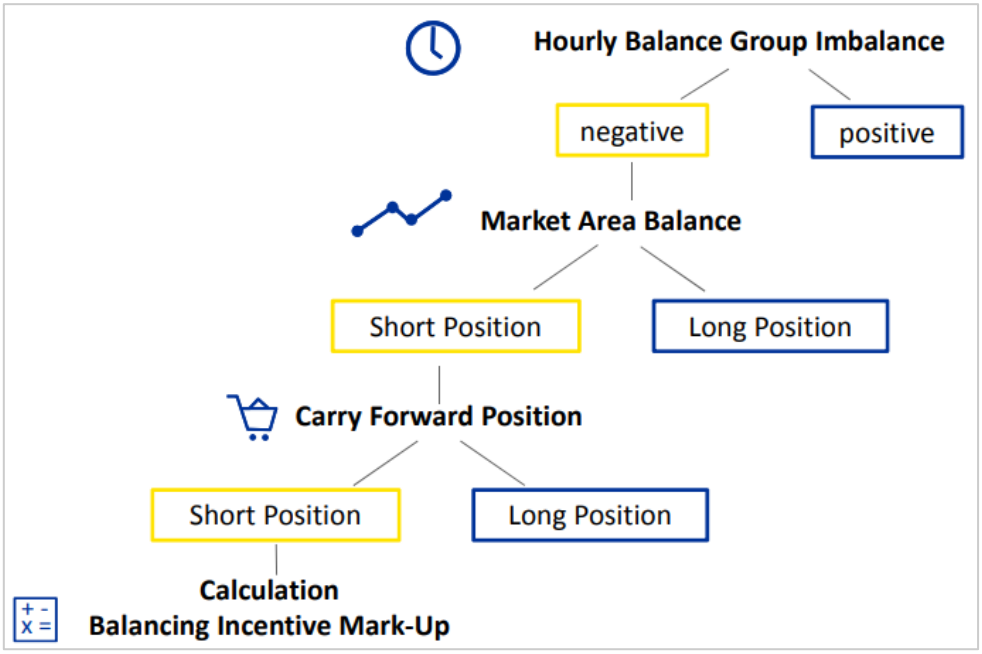


*Figure 5 Balancing incentive markup method*

The current balancing incentive markup method serves in particular as an incentive to reduce short positions. The amounts to be used for calculating an hourly short position are listed in the two tables below.

### 4.1.1 Calculation method 1 January to 31 December 2018

As planned, the rate scale in force since 1 June 2017 was not changed in 2018.

| Hourly deviations of a short position in kWh | Amount of balancing incentive markup in eurocents |
|---|---|
| Volumes between 0 and 400,000 kWh | 0.09 cent/kWh |
| Volumes > 400,000 kWh | 0.9 cent/kWh |

*Table 4: 2018 rate scale*

## 4.2 Balancing incentive markups charged in 2018

In 2018, the MAM charged the volumes and amounts (in Euro, excl. VAT) listed below by month and scale:

| Month | Balancing incentive markup by scale - 0.09 cent/kWh | | Balancing incentive markup by scale 0.9 cent/kWh | | Total balancing incentive markups | |
|---|---|---|---|---|---|---|
| | kWh | € | kWh | € | kWh | € |
| January | 38 052 502 | 34,247.32 | 0 | 0.00 | 38 052 502 | 34,247.32 |
| February | 40 617 808 | 36,556.10 | 16 696 832 | 150,271.49 | 57 314 640 | 186,827.59 |
| March | 15 064 644 | 13,558.18 | 6 225 936 | 56,033.42 | 21 290 580 | 69,591.60 |
| April | 2 454 413 | 2,208.98 | 0 | 0.00 | 2 454 413 | 2,208.98 |
| May | 4 122 351 | 3,710.17 | 806 166 | 7,255.49 | 4 928 517 | 10,965.66 |
| June | 19 099 747 | 17,189.78 | 4 406 140 | 39,655.26 | 23 505 887 | 56,845.04 |
| July | 11 644 703 | 10,480.22 | 10 530 427 | 94,773.84 | 22 175 130 | 105,254.06 |
| August | 25 063 441 | 22,557.08 | 533 674 | 4,803.07 | 25 063 441 | 27,360.15 |
| September | 30839435 | 27,755.54 | 0 | 0.00 | 30839435 | 27,755.54 |
| October | 12 455 493 | 11,209.91 | 24 950 530 | 224,554.77 | 37 406 023 | 235,764.68 |
| November | 8 626 134 | 7,763.57 | 0 | 0.00 | 8 626 134 | 7,763.57 |
| December | 16 053 211 | 14,447.84 | 12 216 772 | 109,950.95 | 28 269 983 | 124,398.79 |
| **Total** | **224 093 882** | **201,684.69** | **76 366 477** | **687,298.29** | **300 218 601** | **888,982.98** |
| **June - December 2017** | | | | | | |
| **Total** | **133 847 583** | **120,462.87** | **712 000** | **152,702.27** | **170 748 904** | **273,165.14** |

*Table 5: Balancing incentive markups charged in 2018*

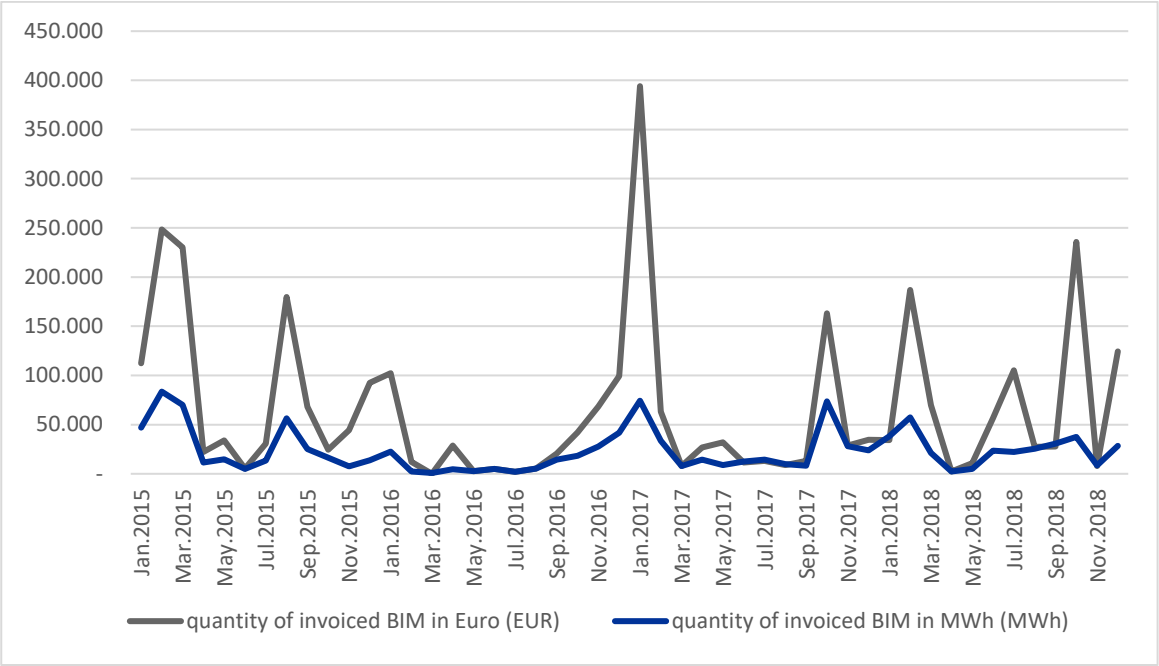


*Figure 6: Comparison of balancing incentive markups, 2015-2018*

In 2018, a total of **171 invoices were issued to 53 BGRs** (in 2017 82 invoices were issued to 38 BGRs).
The current method stipulates that monthly balancing incentive markups below EUR 50 for a given BG will not be charged. In 2018, **no balancing incentive markups were charged in 118 cases** due to this provision. By comparison, charges were not applied in 99 cases in 2017.

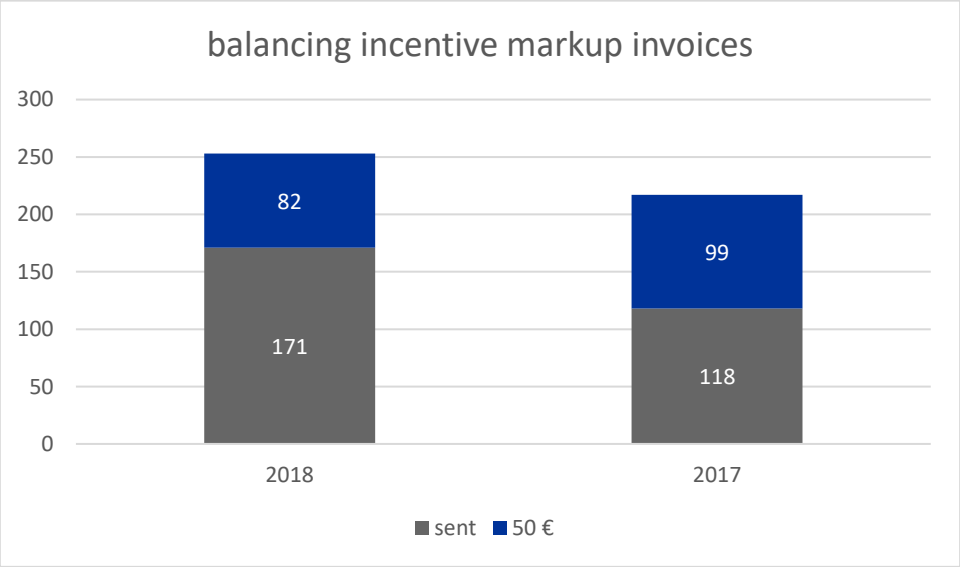


*Figure 7: Balancing incentive markup invoices*

## 4.3 Offsetting of open carry-forward accounts

The MAM did not offset any carry-forward accounts of BGRs due to suspension of services and blocking of individual BGRs in 2018.

## 4.4 Balancing energy fund

At the end of December 2018, the amounts in the balancing energy fund were as follows:

| | |
|---|---|
| **Balancing energy fund as of 31 December 2017** | **273,140.70 €** |
| Total of balancing incentive markups (Jan. 2018 -December 2018) | 888 982.98 |
| **Balancing energy fund as of 31 December 2018** | **1,162,123.68 €** |

*Table 6: Balancing energy fund, 2018*

# 5 Conclusions and summary

The 2018 balancing report shows that balancing activities carried out by AGGM remained steady in comparison with previous years.

## 5.1 Balancing activities

From January to December 2018, the MAM did not perform any extraordinary call-offs for unbalanced BGs. Compared with 2017, smaller quantities were called off in some months, in other months there were higher call-offs.

Exceptionally low temperatures in large parts of Europe resulted in high gas demand during late February and early March 2018. This, combined with infrastructure restrictions in the European transmission system, caused unusually high demand for imports in a number of countries, with the result that early warnings within the meaning of the Security of Gas Supply Regulation were declared e.g. in the UK and Italy. In Austria, however, relatively well stocked gas storage facilities meant that gas supply was never in jeopardy.
However, this period of extreme cold in late February/early March 2018 did have effects in terms of:

- physical balancing energy prices at the NCG VTP and on the CEGH,
- intraday balancing in the distribution area,
- call-offs due to congestion by balance groups in the MA East.

Greater use was made of intraday capacities offered by the TSOs in 2018. The lead time for purchase of these products is four hours. In view of the lead times for matching with network operators and the TSOs, the standard balancing process on the gas exchange at 3:00 a.m. appears no longer reasonable for all balance groups. The current situation means that affected BGRs are required to pay a balancing incentive markup. In response to this development on the gas market, the MAM, in coordination with E-Control, is considering in future offering an option to suspend the first within-day auctions at 3:00, 4:00 and 5:00 am for BGRs which use within-day capacity products.

## 5.2 Balancing incentive markups

The small number of enquiries on the calculation method for balancing incentive markups submitted by BGRs suggests that the method is comprehensible for the market participants.

Several BGRs were faced with high balancing incentive markups (esp. in January and October 2018); the occurrence of those high short positions was due to the BGRs' nomination management, however, this lies within their own sphere of responsibility. Transparency regarding the balancing incentive markups was ensured by publishing the allocation data reports, which are available to BGRs and can be found in the login section of AGGM's Platform.

The rate scale applied to the balancing incentive markup for 2018 was retained, and E-Control carried out a consultation on AGGM's proposed change to the balancing incentive markup settlement approach involving a cumulated carry-forward account. The proposal did not attract

sufficient market support and was therefore not approved. There are no plans to change the rate scale for the moment, as markups charged increased in 2018, particularly at the higher scale. This behaviour by BGRs does not indicate any reduction in the incentive to balance their entries and exits in the interests of system stability.

An increase of EUR 50 in the threshold for the issue of balancing incentive markup invoices could be considered to reduce the administrative burden without undermining the incentive for BGRs to ensure balance.

The cumulative revenues from balancing incentive markups will be adjusted and returned to the market as required by law at the end of the third regulatory period in 2020.