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COMMUNICATION FROM THE COMMISSION

Publication of the total number of allowances in circulation in 2023 for the purposes of the Market Stability Reserve under the EU Emissions Trading System established by Directive 2003/87/EC

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1. INTRODUCTION

In 2015, the European Parliament and the Council of the EU adopted Decision (EU) 2015/1814¹ ('the MSR Decision') to create a Market Stability Reserve (MSR) as part of the EU Emissions Trading System (ETS) set up by Directive 2003/87/EC² ('the ETS Directive'). The purpose of the reserve is to avoid having a structural surplus of allowances on the EU carbon market. This carries the associated risk that a surplus prevents the EU ETS from giving the investment signal needed to achieve the EU's emission reduction target in a cost-efficient manner. The aim is also to make the EU ETS more resilient to supply-demand imbalances, thus enabling the EU carbon market to function smoothly. The reserve began operating in January 2019.

Under Article 1(4) of the MSR Decision, for the purposes of the reserve, every year the Commission publishes the total number of allowances in circulation (TNAC) for the previous year. This figure determines whether allowances are withdrawn from the auction volume and placed in the reserve or released from the reserve and auctioned. The annual publication of the TNAC is therefore an important feature of the MSR and the EU ETS.

On 15 May 2023, the Commission published the TNAC for 2022, which amounted to 1 134 794 738³. Accordingly, 272 350 737 allowances were to be placed in the reserve from 1 September 2023 to 31 August 2024. The number of allowances in the reserve that were invalidated on 1 January 2023 totalled 2 515 135 787.

This Communication is the eighth TNAC publication and concerns 2023. It details the underlying calculation and the number of allowances that will be placed in the reserve from 1 September 2024 to 31 August 2025. It also indicates the number of allowances in the reserve that were invalidated on 1 January 2024.

The Communication highlights significant changes in the operation of the MSR that were introduced under the 'Fit for 55' legislative package – as part of the revisions of the MSR

¹ Decision (EU) 2015/1814 of the European Parliament and of the Council of 6 October 2015 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading scheme and amending Directive 2003/87/EC, [OJ L 264](#), 9.10.2015, p. 1.

² Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC, [OJ L 275](#), 25.10.2003, p. 32.

³ [C/2023/2929](#) - Communication from the Commission - Publication of the total number of allowances in circulation in 2022 for the purposes of the Market Stability Reserve under the EU Emissions Trading System established by Directive 2003/87/EC 2023/C 172/01, OJ C 172, 15.5.2023.

Decision⁴ and ETS Directive⁵ – as well as changes set out in Regulation (EU) 2023/435⁶ (‘the REPowerEU Regulation’), adopted as part of the EU’s response to the energy crisis.

2. FUNCTIONING OF THE MARKET STABILITY RESERVE

The MSR functions automatically when the TNAC is outside the set range. Allowances are withdrawn from the auction volume and placed in the reserve if the TNAC exceeds the threshold of 833 million. The intake rate of the reserve is set at 24% of the TNAC when this number is above 1 096 million. When the TNAC is between 833 million and 1 096 million, the intake is the difference between the TNAC and 833 million. If the TNAC is less than the threshold of 400 million, 100 million allowances are released from the reserve and auctioned. Allowances are either placed in or released from the reserve over the course of 12 months. From 2023 onwards, any allowances held in the reserve above the threshold of 400 million are no longer valid.

Under Article 1(5) of the MSR Decision and in line with this Communication, 24% of the TNAC on 31 December 2023 or the difference between the TNAC and 833 million will be placed in the reserve over a period of 12 months, starting on 1 September 2024. A corresponding number of allowances will be deducted from the auction volumes of EU Member States, the three European Economic Area - European Free Trade Association countries – Iceland, Liechtenstein and Norway – as well as the United Kingdom for the generation of electricity in Northern Ireland. These will be deducted in line with countries’ respective auction shares.

Under Article 1(5) of the MSR Decision, until 31 December 2030, any allowances distributed for the purposes of solidarity and growth in the EU ETS⁷ are not included in the calculation of the relevant shares for the purposes of the MSR.

The REPowerEU Regulation amends the ETS Directive to derogate from Article 1(5a) of the MSR Decision by using 27 million unallocated allowances in the MSR for the Innovation Fund. These would be deducted from the total quantity of unallocated allowances that would otherwise be invalidated over the period until 31 December 2030. This amendment had already taken effect before those allowances in the reserve that were above the threshold of 400 million were invalidated on 1 January 2024.

⁴ Decision (EU) 2023/852 of the European Parliament and of the Council of 19 April 2023 amending Decision (EU) 2015/1814 as regards the number of allowances to be placed in the market stability reserve for the Union greenhouse gas emission trading system until 2030 ([OJ L 110](#), 25.4.2023). See [consolidated text](#).

⁵ Directive (EU) 2023/959 of the European Parliament and of the Council of 10 May 2023 amending Directive 2003/87/EC establishing a system for greenhouse gas emission allowance trading within the Union and Decision (EU) 2015/1814 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading system ([OJ L 130](#), 16.5.2023). See [consolidated text](#).

⁶ Regulation (EU) 2023/435 of the European Parliament and of the Council of 27 February 2023 amending Regulation (EU) 2021/241 as regards REPowerEU chapters in recovery and resilience plans and amending Regulations (EU) No 1303/2013, (EU) 2021/1060 and (EU) 2021/1755, and Directive 2003/87/EC ([OJ L 63](#), 28.2.2023).

⁷ Under Article 10(2), point b of Directive 2003/87/EC.

3. TOTAL NUMBER OF ALLOWANCES IN CIRCULATION

Under Article 1(4) of the MSR Decision, the total number of allowances in circulation in a given year *'shall be the cumulative number of allowances issued in respect of installations and shipping companies and not placed in the reserve in the period since 1 January 2008, including the number of allowances that were issued pursuant to Article 13(2) of Directive 2003/87/EC, in the version in force on 18 March 2018, in that period and entitlements to use international credits exercised by installations under the EU ETS, up to 31 December of that given year, minus the cumulative tonnes of verified emissions from installations and shipping companies under the EU ETS between 1 January 2008 and 31 December of that same given year, and any allowances cancelled in accordance with Article 12(4) of Directive 2003/87/EC.'*

In short, the TNAC relevant for the operation of the MSR is calculated using the updated formula:

$$\text{TNAC} = \text{Supply} - \text{Demand}$$

The two elements of the calculation are described in detail in this Communication. An overview of all figures is presented in the table at the end.

Under Article 1(4a) of the MSR Decision, allowances issued for aviation and verified aviation emissions from 1 January 2024 will be included in the TNAC calculation for 2024.

Under the ETS Directive, the EU ETS covers emissions from maritime transport activities from 1 January 2024 onwards, and the supply and demand from the shipping companies will be reflected in the TNAC calculation for 2024.

Supply

The supply of allowances on the EU carbon market consists of the following elements.

- Allowances banked⁸ from phase 2 of the EU ETS (2008-2012), which amounted to **1 749 540 826**⁹.
- Allowances allocated for free from 1 January 2013 to 31 December 2023, including the allowances allocated from the New Entrants Reserve (NER). This volume amounts to **8 222 698 758** allowances¹⁰.

⁸ Allowances issued during phase 2 of the EU ETS (2008-2012), which were not surrendered to cover verified emissions or cancelled were 'banked' for use at the beginning of phase 3 of the EU ETS (2013-2020). These allowances were deleted and simultaneously an equal number of allowances was created in phase 3. Thus, this number represents the exact number of ETS allowances in circulation at the start of phase 3 of the EU ETS.

⁹ [COM \(2015\) 576](#) - Report from the Commission to the European Parliament and the Council - Climate action progress report, including the report on the functioning of the European carbon market and the report on the review of Directive 2009/31/EC on the geological storage of carbon dioxide.

¹⁰ Based on an extract of the EU Transaction Log (EUTL) on 1 April 2024.

- Allowances auctioned from 1 January 2013¹¹ to 31 December 2023, and allowances used for flexibility purposes in 2021-2023 under Article 6 of Regulation (EU) 2018/842¹² ('the Effort Sharing Regulation'). According to auction reports on the common auction platform and the relevant opt-out platforms¹³, the volume of allowances auctioned, including 'early auctions', was **7 591 181 500**. To this volume, **21 641 364** allowances must be added under the flexibility set out in Article 6(2) of the Effort Sharing Regulation¹⁴.
- Allowances monetised for the NER300 programme. A total of **300 000 000** allowances were monetised by the European Investment Bank.
- International credits exercised for emissions up to 31 December 2020¹⁵. Installations used **497 248 017** international credits for the emissions they generated¹⁶.
- Under Article 1(4) of the MSR Decision, allowances placed in the MSR **are no longer part of the TNAC calculation**.

Demand

Demand for allowances on the EU carbon market comprises the total verified emissions from installations from 1 January 2013¹⁷ to 31 December 2023, which amount to **17 269 905 658** tonnes¹⁸, and **668 272** allowances cancelled during this period under Article 12(4) of the ETS Directive.

¹¹ This figure includes 'early auctions' i.e. allowances valid for phase 3 of the EU ETS (2013-2020), which had been auctioned before 1 January 2013.

¹² Regulation (EU) 2018/842 of the European Parliament and of the Council of 30 May 2018 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement and amending Regulation (EU) No 525/2013, [OJ L 156](#), 19.6.2018, p. 26.

¹³ Auction reports: European Energy Exchange ([EEX](#)) and Intercontinental Exchange ([ICE](#)).

¹⁴ Regulation (EU) 2018/842 creates a one-off flexibility whereby Member States can have up to a maximum of 100 million EU ETS allowances collectively cancelled in 2021-2030, so they can comply with their respective greenhouse gas emission reduction targets under this Regulation. The flexibility concerns Member States with targets significantly above both the EU average and their potential to make cost-effective reductions, as well as Member States that did not allocate any free EU ETS allowances to industrial installations in 2013. A cancellation is made from the auctioning volume of the Member State concerned under Article 10 of Directive 2003/87/EC. Cancelled allowances are considered as EU ETS allowances in circulation when determining the total number of allowances in circulation for the purposes of the MSR in a given year.

¹⁵ International credits cannot be used for compliance in phase 4 of the EU ETS (2021-2030).

¹⁶ Based on an extract of the EUTL from 1 April 2024. These international credits concern only those exchanged for EU allowances in phase 3 of the EU ETS (2013-2020). Approximately 1.1 billion international credits that could be used directly for compliance purposes in phase 2 of the EU ETS (2008-2012) are reflected in the number of allowances banked from phase 2.

¹⁷ Corresponding to the verified emissions in the period 2008-2012 (phase 2), see footnote 8.

¹⁸ The total verified emissions are based on the data extracted from the EUTL on 1 April 2024. The figure takes into account verified emissions reported by 31 March 2024 – the reporting deadline in the EU ETS. Emissions reported after this date are not reflected in the total.

Total number of allowances in circulation

Based on the above, the TNAC in 2023 amounts to **1 111 736 535** allowances.

Holdings of the Market Stability Reserve

Following the invalidation of allowances on 1 January 2023, 486 087 000 allowances remained in the reserve.

In line with the communications on the TNAC in recent years, the following volumes of allowances were placed in the reserve:

- **231 874 266** allowances from 1 January 2023 to 31 August 2023¹⁹;
- **90 783 578** allowances from 1 September 2023 to 31 December 2023²⁰.

On 31 December 2023, there were **808 744 844** allowances in the MSR. Out of this volume, 27 million allowances were set aside for the Innovation Fund under Article 10e(4) of the ETS Directive.

On 1 January 2024, **381 744 844** of these allowances were invalidated under Article 1(5a) of the MSR Decision. The remaining holdings of the reserve amount to **400 000 000** allowances.

4. CONCLUSION

In line with the MSR Decision, a total of **266 816 768** allowances will be placed in the Market Stability Reserve over a 12-month period from 1 September 2024 to 31 August 2025.

Next year's publication of the TNAC for the purposes of the MSR will determine the reserve's operation from September 2025 until August 2026.

¹⁹ [C/2022/2780](#) - Communication from the Commission - Publication of the total number of allowances in circulation in 2021 for the purposes of the Market Stability Reserve under the EU Emissions Trading System established by Directive 2003/87/EC and of the number of unallocated allowances during the period 2013-2020 2022/C 195/02 (OJ C 195, 13.5.2022, p. 2). Corrigendum to the Communication – [C\(2022\) 4874](#). As concluded in point 5 of this Communication, 347 811 404 allowances would be placed in the MSR from 1 September 2022 to 31 August 2023. The volume corresponding to the period from 1 January to 31 August 2023 was 231 874 266.

²⁰ C/2023/2929, as previously mentioned. As concluded in point 4 of this Communication, 272 350 737 allowances would be placed in the MSR from 1 September 2023 to 31 August 2024. The volume corresponding to the period from 1 September to 31 December 2023 was 90 783 578.

OVERVIEW

Supply	
a) Allowances banked from phase 2 (2008-2012)	1 749 540 826
b) Allowances allocated for free from 1 January 2013 to 31 December 2023, including from the NER	8 222 698 758
c) Allowances auctioned from 1 January 2013 to 31 December 2023, including early auctions	7 591 181 500
d) Allowances used for flexibility purposes in 2021-2023 under Article 6 of Regulation (EU) 2018/842	21 641 364
e) Allowances monetised for the NER300 programme	300 000 000
f) International credits used for emissions up to 31 December 2020	497 248 017
Sum (supply)	18 382 310 465
Demand	
a) Verified emissions (in tonnes) from stationary installations under the EU ETS from 1 January 2013 to 31 December 2023	17 269 905 658
b) Allowances cancelled under Article 12(4) of Directive 2003/87/EC up to 31 December 2023	668 272
Sum (demand)	17 270 573 930
Total number of allowances in circulation	1 111 736 535

MSR holdings

Allowances in the MSR on 31 December 2023	808 744 844
Allowances set aside for the Innovation Fund under Article 10e(4) of Directive 2003/87/EC	27 000 000
Allowances that were invalidated on 1 January 2024	381 744 844
Allowances in the Market Stability Reserve on 1 January 2024	400 000 000
