

The Auctioning of EU Allowances in the EU ETS Under the Current Trading Period

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Abstract

This paper provides an introduction to the auctioning within the EU's Emissions Trading System via the European Energy Exchange (EEX) and ICE Futures Europe (ICE).

To this purpose, the paper refers to the current situation of the national legislative and institutional framework in the field of the auctioning of ETS allowances and how it is linked and react to the EU policy/institutions. I depict the actors involved at EU and national level in the development and implementation of auctioning, but also how this process work in practice and the way auctions are conducted, the products, the participants, the EEX - EU common platform, auctioning volumes and their corresponding revenues at EU and national level and their use .

The paper is descriptive, namely Article 10 of Directive 2009/29/EC and the revised Auctioning Regulation, to provide background for more analytically oriented articles, as well as to provide a presentation for readers who wish to learn about or be updated on the progress of the auctioning in EU ETS, especially at national level.

Key words: climate change, EU Emission Trading Scheme, EU Allowances, auction, revenues

J.E.L. classification: Q54

1. Introduction

The Directive 2003/87/EC establishes auctioning as the basic principle for allocation of emission allowances. Auctioning also provides a level playing field for competition on the internal electricity market to be further developed.

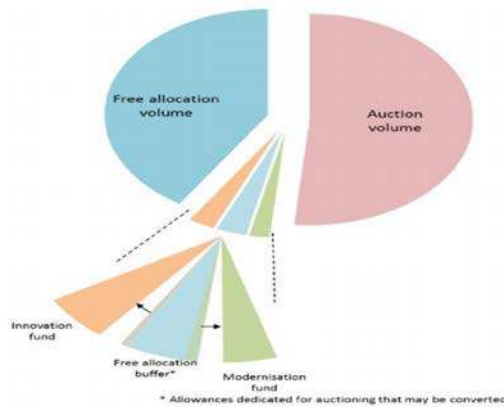
The ETS Directive contains the general principle that all allowances not allocated free of charge are to be auctioned. In order to support clean technologies, from 2013 onwards EU ETS provides that greenhouse gas emissions allowances will be auctioned by Member States and no longer shall be given for free to industry . As Gans (2019) mentioned, "This means that businesses have to buy an increasing proportion of their allowances at auction or on the secondary market. In sectors other than power generation, a transition to auctioning takes place progressively over time".

Auctioning puts into practice the polluters pay principle and will eliminate windfall profits. In sectors other than power generation, a transition to auctioning takes place progressively. Starting 2013 ETS industry received 80% of its allowances free of charge, but this will decrease annually to 30% in 2020 and all the allowances not allocated for free shall be auctioned. In 2013 more than 40% of annual allowances were auctioned, considering the significant share of power generation installations in the EU ETS and even with partial free allocation in eight Member States. This share will grow during the period, as the volume of allowances allocated for free decreases faster than the cap.

During 2013-2020, the European Commission estimated that 43% of the total amount of allowances will be distributed for free, while 57% of the total amount of allowances will be auctioned.

As well, the European Commission considers that (2018) "The revised EU ETS Directive for phase 4 aims to facilitate the achievement of the threefold objective of a 43% GHG emissions reduction for EU ETS sectors by 2030, safeguarding industrial competitiveness, and fostering low-carbon modernisation and innovation by a series of interlinked measures."

Figure no. 1 Breakdown of available EUA in phase 4



Source: Report on the functioning of the European carbon market, COM(2018) 842 final, 2018

The Auctioning Regulation establishes how works in practice the process of the auctioning of EU allowances (EUA). The details depicted by this regulation refers mainly to timing, administration and other aspects which ensure that the process is managed in an open, transparent, harmonised and non-discriminatory manner across all Member States.

National governments appointed the auction platforms. At the EU level there are two platforms that auction EU allowances:

European Energy Exchange (EEX) in Leipzig - the common auction platform used by 25 Member States; EEX also serves as Germany's and Poland's opt-out auction platform; ICE Futures Europe (ICE) in London - the United Kingdom's opt-out auction platform.

The EEA-EFTA States will auction on the common auction platform as well.

According to the EU architecture each Member State must appoint its auctioneer which is responsible for offering the allowances to be auctioned to the auction platform on behalf of that Member State. It also receives the auction proceeds and disburses these proceeds to the appointing Member State.

A private or public body may be the auctioneer. At the same time the Auction Regulation foresees a single independent auction monitor for all auctions on all auction platforms which must oversight the auctions. In this respect it must submit monthly a report to Member States and the Commission on all auctions conducted that month.

According to the Auctioning Regulation, at national level is established the following institutional framework: the Ministry of Public Finance is the authority designated as an auctioneer; the National Securities Commission is the competent authority for the authorization according to art. 18 paragraph (3) of the Regulation; the National Energy Regulatory Authority is the competent authority for the authorization according to art. 18 paragraph (2) of the Regulation.

According to art. 55 paragraph (2) of the Regulation, the competent authority for receiving the notification regarding the money and financing of terrorism is the National Office for Preventing and Combating Money Laundering.

The Ministry of Public Finance as auctioneer is authorized to auction through the EU platform (EEX), the EUA allocated to Romania at EU level.

2. Theoretical background

Within the third trading period in 2013, auctioning is progressively replacing free allocation as the main method for allocating allowances to all EU ETS sectors except aviation. Article 10 (4) of Directive 2009/29 determined that the auction procedure is to be conducted in an open, transparent, harmonised and non-discriminatory manner.

According to Gans, A. & all (2019) this means that businesses have to buy an increasing proportion of their allowances at auction or on the secondary market. As Stern (2007) stated financial markets also face big opportunities to develop new trading and financial instruments across a broad range including carbon trading, financing clean energy, greater energy efficiency, and insurance.

By this paper, I present the current situation of the national legislative and institutional framework on auctioning in comparison with the EU level. I also want to further elaborate on the literature with information on the functioning of the main pillar of EU carbon market, namely the auction of EU allowances and its implementation in Romania.

3. Research methodology

The aim of this paper is to identify the existing national bottlenecks as well as to improve the functioning of auctioning through concrete proposals in order to modify/adapt the current national legislative/institutional framework.

This approach takes into account the fact that ensuring a proper implementation at national level allows a coordinated, harmonized and efficient function of auctioning under ETS "carbon market", at EU level, across all 28 Member States.

Regarding the adequacy of the methodology, the EUA price refers to secondary market auctioning data from the EEX compared with the shorter time series of EUA prices from Commission's Communication 2011/C 99/03 "Guidance document on the optional application of Article 10c of Directive 2003/87/EC".

At the same time I analyzed legislation and assessed relevant data and documents of the European Commission, European Environment Agency, private company, Ministry of Finance, Ministry of Economy, such as the Ministry of Energy, international and European institutions (sites and publications).

Through the process, I have created an electronic database by collecting data on the auctioning.

Based on the current research on the functioning of the EUAs auctioning at national and EU level, this overview may be helpful to recognize this allocation method for 2030 and guide its efficient implementation, including in our country.

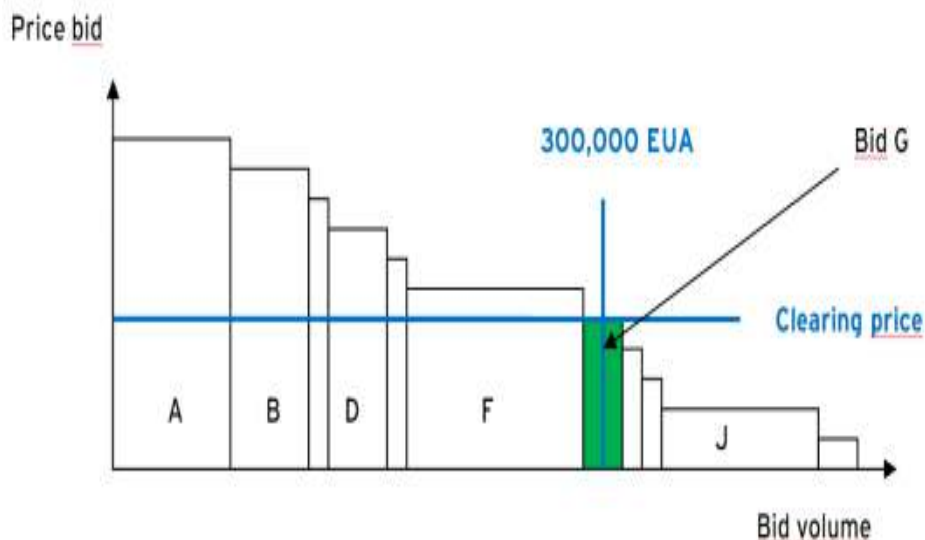
4. Findings

Auctioning of EU allowances - how the auctions are conducted: single-round, sealed bid, uniform price is the format used for EUA auctions which ensures participation of bidders, including by SMEs and small emitters covered by the ETS Directive.

To be a successful bidder one should have placed bids at or above the clearing price. All successful bidders pay the same price, regardless of the price they specified in their bids.

According to World Bank(2015) "at the end of the auction window, bids are sorted by descending bidding price. Bidders are served as long as the total quantity of allowances that was available for the auction is not reached".

Figure no. 2. Auctioning procedure – placing the bids



Source: (World Bank, 2015, p. 34)

Products auctioned. The EUA can be spot products which means that within a maximum of five working days after the auction they must be delivered.

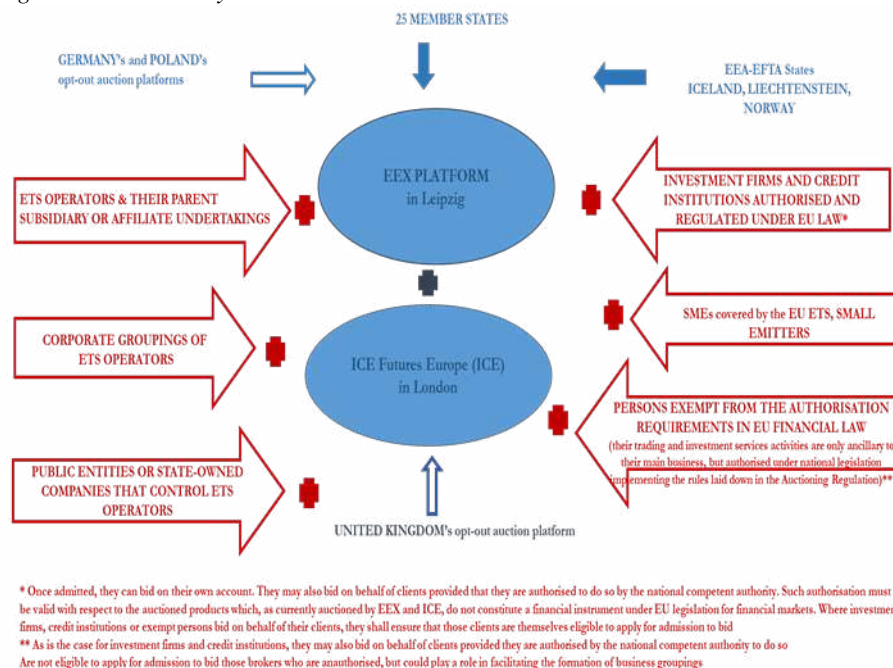
Radu and Boaja (2007) demonstrated that "(...) the delivery and payment (goods or services) take place, at least theoretically, immediately after the conclusion of the contract, in which case it is called spot contract. ... the basic feature of this type of contract is that it involves the mandatory delivery of the goods and the payment at the course spot or at the spot rate set on that day".

Considering the EU regulatory framework for financial instruments markets, the EUA may be a financial instrument. The products auctioned by EEX and ICE are not such financial instruments.

As Stern (2007) demonstrated. „Financial markets also face big opportunities to develop new trading and financial instruments across a broad range including carbon trading, financing clean energy, greater energy efficiency, and insurance”.

Participants in the auctions. Any buyer from EU and the EEA-EFTA may participate in an auction.

Figure no. 3 Primary EUAS market



Source: Author`s creation by the use of https://ec.europa.eu/clima/policies/ets/auctioning_en

The European Energy Exchange (EEX) represents EU`s common platform with the greatest level of harmonisation and predictability as compared to auctioning through two or more parallel national auction platforms. The Member States and the Commission have a common platform to auction emission allowances on behalf of the Member States.

Adequate coordination between the opt-out auction platforms and the common auction platform must be provided. An auction platform can be appointed for 5 years at the most.

European Energy Exchange (EEX) Common and its clearing system was appointed as auction platform by the European Commission and 25 Member States. After one additional year, starting 2016, EEX was re-appointed as a common auction platform for a period up to five years. Three EEA-EFTA states, namely Iceland, Liechtenstein and Norway also contracted the EU`s common platform.

The Commission and all Member States also have a joint procurement agreement for appointing an auction monitor.

Germany, Poland and the United Kingdom opt -out of the common platform and appoint their 'own' auction platform. ICE Futures Europe (ICE) in London was appointed by the UK to be its auction platform.

5. Auctioning volumes and the corresponding revenues

a) At EU level. The total number EUA allocated to Romania in order to be auctioned is calculated according to the provisions of Directive 29/2009 / EC art. 10, paragraph (2) as follows: considering the verified ETS emissions for 2005 or the average of the ETS emissions from 2005-2007, a share of 88% of the EUA to be auctioned will be allocated to MS (whichever is the highest); based on 2 criteria, namely the GDP/capita the possible economic growth, some MS receive 10% of the EUA to be auctioned; 2% of EUA to be auctioned will be distributed only to MS whose greenhouse gases emissions in 2005 where at least 20% under the Kyoto Protocol target (Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania and Slovakia).

For 2021-2030 period, the EUA allocated for auctioning will be distributed as follows: according to the emission criterion, i.e. the share held by the Member State concerned in total ETS verified emissions under the EU ETS, 90% of the total number of allowances will be allocated to all MSs; the rest of 10% will be distributed to certain MS for the application of the principle of solidarity , but also for growth and interconnections. For this purpose and for those countries with GDP / capita under 90% will be used the 2013 data. In Chapter III and II of the Auctioning Regulation are provisions on the annual volumes to be auctioned and the timing and frequency of auctions .

At EU level, the total amount to be auctioned in the period 2013 - 2020 is represented by 8,176,193,157 EU allowances. This estimated amount also includes volumes to be allocated free of charge pursuant to Article 10c of the ETS Directive. If Member States decide to use this option, from the estimated amount to be auctioned must be deducted the corresponding amount for 10c allocation (maximum transitional free allocation for electricity generators).

If we do so, we reach the number of 7,496,268,081 EUA to be auctioned at the EU level during the current trading period.

Considering the data from *Table 1. The amount of general allowances auctioned in the current trading period at EU level (2013 – 2020)* this represents more than 45,8 billion euro for the amount including 10 c allocation.

The variation of EUA prices, between 3,96 and 15,58 euro was calculated considering the dynamic and evolution of ETS trading under the EEX during 2013-2018 period.

Table no. 1. The amount of general allowances auctioned in the current trading period at EU level (2013 – 2020)

Year	The estimated EUA (tonne of CO2 eq)	EUA price on the secondary market (euro)
2013	1,066,444,135	3,96
2014	1,055,457,778	5,23
2015	1,043,568,216	6,87
2016	1,030,777,152	4,71
2017	1,017,062,324	5,16
2018	1,002,630,749	13,41
2019	987,734,136	15,48
2020	972,518,667	
Total	8,176,193,157	

Source: adapted from https://ec.europa.eu/clima/policies/ets/auctioning_en#tab-0-2

b) At national level. Considering the provision of the of Directive 29/2009 / EC art. 10, paragraph (2), Romania`s share of EUA to be auctioned represents 4,898% out of the total number of certificates available at European Union level. This percentage is divided into three categories as follows: a) the percentage related to historical emissions - Article 10 (2) a, respectively 2.84348%; b) the percentage related to the principle of solidarity - Article 10 (2) b, respectively 1.47495%; c) the percentage related to the progress made in 2005 for achieving the objectives of the Kyoto

Protocol - Article 10 (2) c, respectively 0.58%.

Table no. 2. The amount of allowances auctioned by RO in 2013 – 2020

Year	The estimated EUA (tonne of CO2 eq) including 10c EUA	The estimated EUA (tonne of CO2 eq) without 10c EUA
2013	52.234.433,73	52.234.417,99
2014	51.696.321,97	51.696.313,38
2015	51.113.971,22	51.113.962,01
2016	50.487.464,90	50.487.457,72
2017	49.815.712,63	49.815.706,41
2018	49.108.854,09	49.108.848,99
2019	48.379.217,98	48.379.215,43
2020	47.633.964,31	47.633.964,31
Total	400.469.940,83	400.469.869,43

Source: adapted from Report on the functioning of the European carbon market - COM(2018) 842 final, 2018

6. The use of revenues in Romania

Member States must use for climate and energy related purposes at least 50 % of auctioning revenues or the equivalent in financial value of these revenues according to the revised EU ETS Directive.

Esch (2013) indicated that „ The revenues from the auction will be redistributed in the following manner: 1) 29 % to the state budget; 2) 71 % will go to projects.

Separately, the revenues from auctioning certificates from aviation will be directed as follows: 1) 70 % towards the Ministry of Transport and Infrastructure, for projects to reduce emissions; 2) 30 % towards the Ministry of Environment, also for projects to reduce emissions”.

The percentage of 4,898% is divided as follows: 3,477%, representing 71% of the share of certificates allocated to Romania, consisting of 50% of the percentage related to point (a) - 1,422%, 100% of the percentage related to point (b) - 1,47495% and 100% of the percentage related to point (c) - 0.58%, with projects aimed at adapting to the effects of climate change and reducing greenhouse gas emissions; 1.422%, representing 29% of the share of certificates allocated to Romania, consisting of 50% of the percentage related to point (a) - 1,422%, having as destination the state budget.

In 2019, the Romanian Government issued and legislative act which states that: a) 29% from the revenues from the auction will be distributed to the state budget; b) 50% of the revenues is made income to the Environmental Fund; c) 21% of the revenues will go to the Ministry of Economy, Energy and Business Environment in order to implement financial measures in favor of the sectors or of the subsectors that are exposed to significant risks of carbon leakage provided that such financial measures are according to the state aid rules.

Until 2018, the authorities used 139 mil. EUR from the auctioning revenues by derogating from the scope of the EU ETS Directive, mainly in the transport sector:

- the Metrorex infrastructure and investments 76 mil. EUR;
- purchase of minibuses and buses – 43 mil. EUR;
- reconversion of public transport buses from Diesel to liquefied gas - 5 mil. EUR.
- bicycles tracks/infrastructure - 10 mil EUR.

According to World Bank (2015) ”Until now, there is no clear, effective procedure for the administration and share of ETS auctioning revenues and no selection and prioritization criteria and guidance at the Environmental Administration Fund”.

Based on the analysis performed by World Bank in 2015 the following sectors could be the pillars for the allocation of the EUA auction revenues: increase in energy efficiency of the households (other measures than those included in the Regional Operational Program and in the

National Program for Thermal Rehabilitation of Buildings); replacement of light bulbs, air conditioners, refrigerators and washing machines in households; development of renewable energy production on a small scale and for domestic use (existing investments covers only larger producers); forestry, biomass production and improvement of land use (complementary to any actions proposed in the National Plan for Rural Development for the period 2014-2020 or which are not included in it).

The same analysis mentions that the greatest potential to bring private money has the replacement of light bulbs, air conditioners, refrigerators and washing machines in households. If the public funds allocated to the program will be EUR 88 million, the program could attract up to EUR 205 million from the private sector.

Considering this criteria, the following 2 sectors are ranked as follows:

- households energy efficiency (with EUR 749 million as public funds for the program, possible additional contribution from the private sector could be up to 1.39 billion);
- the production of renewable energy on a small scale and for domestic use (with EUR 330 million as public funds allocated to the program, possible additional contribution from the private sector could be up to EUR 612 million).

Table no. 3. The amount of revenues for 2013 – 2020 in RO

Year	The revenues – euro
2013	207.101.249,83
2014	270.725.015,75
2015	351.164.521,58
2016	237.831.956,87
2017	257.429.237,55
2018	658.578.912,09
2019	749.006.415,42
2020	373.197.361,51
Total	3.105.034.670,60

Source: adapted from Report on the functioning of the European carbon market - COM(2018) 842 final, 2018

7. Conclusions

Being the main allocation method for the current and next trading period under ETS, the auctions of EUAs represent the pillar of the functioning of the carbon market at EU and national level.

Considering increasing volumes of EUA for auctioning and the correspondent prices, the revenues from auctioning become the main financing resource for national, EU and international climate measures in the fight against global warming.

At national level, the revenues from auctioning the allowances were used without having an appropriate and efficient assessment procedure, transparent criteria and guidance nor based on the GHG benefits and costs reduction effectiveness. The selection system is not coordinated with sectoral Operational Programs under EU Cohesion Policy or other instruments to reduce GHG emissions.

Until 2018, the authorities used 139 mil. EUR from the auctioning revenues by derogating from the scope of the EU ETS Directive, mainly in the transport sector.

Starting 2019, Romania applied financial measures in favor of sectors or subsectors that are at risk of carbon leakage by allocating 21% of the amount of auctioning revenues for the compensation of indirect CO2 emissions.

The analysis of World Bank mentioned that the greatest potential to bring private money has the replacement of light bulbs, air conditioners, refrigerators and washing machines in households.

ETS auctioning revenues are indeed used, but financial and organizational scheme should be improved and further developed while amending the current legislative framework and financial and institutional scheme. An efficient and transparent use of funds from ETS revenues representing

more than 3, 105 billion euro for the period 2013-2020 requires the development of a viable and longer term climate financing mechanism.

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