Case Study: Wrongly Allocated Emission Permits in Korea

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Abstract

This paper analyzes an administrative litigation case concerning South Korea's Greenhouse Gas Emissions Trading System (ETS). The Korean government operates the ETS to achieve its carbon neutrality goals, but legal disputes have arisen over the fairness and accuracy of emissions permit allocation. The case study focuses on the cement industry, where one manufacturer (Company A) intentionally inflated its past greenhouse gas emissions to receive a larger allocation of permits. This prompted the other six cement manufacturers to file a lawsuit, which has proceeded through three rounds of litigation. In the first lawsuit, the court held that Company A's emissions calculation was unlawful. However, the government's subsequent retroactive revision of its guidelines led to a second lawsuit, which the government also lost. The ongoing third lawsuit centers on the calculation method for "estimated emissions" when historical data is absent. This case illustrates how technical details in the allocation process can undermine the credibility of the entire system, highlighting that its success or failure ultimately hinges on such details.

Keywords:

Carbon Neutrality, Green Growth, Climate Change, Emissions Trading System, Sustainable Development

1. Overview

Since 2010, the Republic of Korea has been implementing the "Framework Act on Carbon Neutrality and Green Growth for Coping with Climate Crisis."[1] The purpose of this Act is to strengthen policy measures to reduce greenhouse gases and adapt to climate change in order to prevent serious impacts of the climate crisis, resolve economic, environmental, and social disparities that may arise in the course of transition to a carbon-neutral society, and foster, promote, and revitalize green technology and green industry to promote a harmonious development of the economy and environment. In this way, the law seeks to improve the quality of life of present and future generations, protect the ecosystem and climate system, and contribute to the sustainable development of the international community. The Korean government has been operating a system for trading greenhouse gas emission permits (hereinafter referred to as **"emissions trading system"** or **"ETS"**) by setting a cap on such emissions and taking advantage of market functions in order to achieve the national vision, reach mid- to long-term reduction targets, etc. more efficiently.

Details of the ETS are described in the "Act on the Allocation and Trading of Greenhouse Gas Emission Permits" (hereinafter referred to as the **"Korean ETS law"**), which has been in effect since 2012. This paper provides an overview of the Korean ETS law and introduces one of the largest cases of administrative litigation in Korea.

2. Korean ETS regulation

The main purpose of the Korean ETS law is to allocate greenhouse gas emission permits to companies that emit large amounts of greenhouse gases in order to efficiently achieve national greenhouse gas reduction goals and to introduce a system that allows the allocated emission permits to be traded through the market.

Korean ETS law requires the government to establish a ten-year master plan for the emissions trading system (hereinafter referred to as **"master plan"**) every five years, which shall define the objectives and basic direction of medium- to long-term policies on this system. Such plans include the following:

1. matters regarding the current status of and projections for the domestic and international markets for the emissions trading system;
2. matters regarding the basic direction of the operation of the emissions trading system;
3. matters regarding the enforcement of commitment periods for the emissions trading system, considering national greenhouse gas reduction targets;
4. matters regarding projections for greenhouse gas emissions produced as a consequence of economic growth, new investment in each sector and type of business, and the expansion of facilities (referring to places of business producing greenhouse gases or part of such places of business; hereinafter the same shall apply);
5. matters regarding economic implications, such as the fluctuation of prices of energy and other commodities as a result of the operation of the emissions trading system;
6. matters regarding measures for supporting domestic industries, considering

[1] The original name of this Act in 2010 was "Framework Act on Low Carbon, Green Growth."

international trade intensity, carbon intensity, etc.;
7. matters regarding plans for linking with international carbon markets and fostering international cooperation;
8. other matters regarding the effective operation of the emissions trading system, including financing, the cultivation of professional human resources, education, public relations, etc.

Additionally, the Korean ETS law requires government to establish a plan to allocate national emission allowances for each commitment period (hereinafter referred to as **"allocation plan"**) by no later than six months prior to the beginning of each commitment period in order to effectively reach national greenhouse gas reduction targets. Such plans include the following:

1. matters regarding the total amount of greenhouse gas emission allowances (hereinafter referred to as "total emission allowances") set considering national greenhouse gas reduction targets;
2. matters regarding the total number of emission permits for the pertinent commitment period and for each compliance year based on total emission allowances;
3. matters regarding sectors and types of business eligible for allocation of emission permits;
4. matters regarding the standards for the allocation of emission permits for each sector and type of business and the amount allocated to each sector and type of business;
5. matters regarding the standards for the allocation of emission permits for each compliance year and the amount allocated for each compliance year;
6. matters regarding the standards and methods for the allocation of emission permits to business entities eligible for allocation;
7. matters regarding the method for the allocation of emission permits, where emission permits are allocated with a meticulous attention to detail;
8. matters regarding the criteria for recognition of the outcomes of earlier plans;
9. matters regarding the number of emission permits in reserve and the criteria for distribution of emission permits in reserve;
10. matters regarding the carryover and borrowing of emission permits and matters regarding the guidelines for offset and the enforcement thereof;
11. other matters prescribed by Presidential Decree necessary for the allocation and trading of emission permits for the pertinent commitment period.

To implement these plans, the Korean government announced three master plans and allocation plans. The first master plan covered the period from 2015 to 2017, allocating 1,691 million tonnes over the three years. Details of this master plan are specified in the allocation plan announced in September 2014.[2] The second master plan was for the period from 2018 to 2020 and involved pre-allocating 1,643 million tonnes out of the total permitted emissions of 1,777 million tonnes. Details are specified in the allocation plan announced in July 2018.[3] The basic plan for the 3rd and 4th planning periods, 2021 to 2030, is currently being announced,[4] and the allocation for each sector from 2021 to 2025 is specified in the allocation plan announced in September 2020.[5]

There are two allocation methods. The grandfathering (hereinafter referred to

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Korean Ministry of Economy & Korean Ministry of Environment (2019), 2–3.

as **"GF"**) method, which allocates based on past greenhouse gas emissions, and the benchmark (hereinafter referred to as **"BM"**) method, which allocates based on the emission intensity of emission facilities within the same industry.[6] While the former has the advantage of being easy to apply on-site, it has the disadvantage of failing to reflect differences in reduction efficiency of emission facilities and the fact that companies with higher emissions are allocated more emission permits. While the latter has the advantage of encouraging progress in carbon reduction technology by allowing facilities with good emission efficiency to be allocated more emission permits, it has the disadvantage of requiring extensive data to calculate benchmarks. The GF method was applied in the Korean cement industry, which will be used as a case study in this paper.

According to the Korean ETS law, the head of Korean Ministry of Environment (hereinafter referred to as the **"competent authority"**) shall designate greenhouse gas emitting companies belonging to the sectors and industries subject to the allocation of emission permits determined in the allocation plan (Article 8), and allocate all emission permits for a commitment period and emission permits for each compliance year to each business entity eligible for allocation for each commitment period in accordance with the allocation plan (Article 12). Note that the competent authority may hold a certain amount of emission permits in reserve for allocating additional permits to new entrants (Article 18).

Emission permits may be sold, bought, or otherwise traded (Article 19); the trade shall be reported to the competent authority on transactions (Article 21); and the allocation and trading of emission permits are managed in the computerized governmental database named "emission permits register" (Article 11). A person who holds emission permits shall carry over those permits to the following compliance year in the same commitment period or to the first compliance year in the following commitment period with approval from the competent authority (Article 28 (1)). A business entity eligible for allocation may borrow some emission permits allocated for any other compliance year in the same commitment period with approval from the competent authority (Article 28 (2)). Or, when a business entity eligible for allocation holds or acquires greenhouse gas reductions generated from an external project in compliance with international standards, it may request the competent authority to convert all or some of such reductions into emission permits (Article 29 (1)). These transactions of carryover, borrowing, and offset are also recorded in the "emission permits register" (Article 28 (4), Article 29 (2)).

A business entity eligible for allocation shall report the amount of greenhouse gas emissions actually produced by all of its places of business during a compliance year based on a plan for calculating this amount and submit the statement to the competent authority within three months from the date of the end of the compliance year (Article 24). In receipt of this report, the competent authority shall evaluate the validity of the details in the report and shall certify the actual amount of greenhouse gas emissions produced by the business entity eligible for allocation (Article 25).

As a result, if the business entity emitted more greenhouse gases than the emission permits it holds, a penalty surcharge not exceeding three times the average market price of emission permits for the pertinent compliance year may be imposed on the business entity within a maximum of 100,000 won per tonne of carbon dioxide for the shortfall (Article 33).

Due to this legal effect, the allocation of emission permits to business entities has the nature of an administrative disposition, and business entities can file

administrative lawsuits against it. In the next section, as a case study, this paper will look at lawsuits filed against the Korean government by cement manufacturers who were allocated emission permits in accordance with the above law.

3. Korean administrative Litigation Case on emission permits

3.1 Outline

Korea's cement market is composed of seven manufacturers. Let us refer to them as A through G. Using the GF method, based on past greenhouse gas emissions, emission permits were allocated to each cement manufacturer by the competent authority on December 2014 (hereinafter referred to as **"1st allocation"**).

The problem is that manufacturer A played a trick to get more carbon credits. The trick was revealed, and the other six manufacturers filed an administrative lawsuit against the competent authority. The claim was that manufacturer A was unfairly allocated a larger quota, and took the share that should have been allocated to the other six manufacturers. It is a general principle of Korean administrative law that when there is competition between competitors over limited resources, competitors are entitled to file administrative lawsuits.

Timeline of the lawsuit filed by cement manufacturers

'11-'13	• Base three years for measuring existing carbon emissions • Sungshin inflated the emissions on '13
'14.12.01.	• 1st carbon credit allocation (for '15-'17) • Other 6 cement manufacturers filed lawsuit(1st)
'17.02.02.	• 1st trial verdict for 1st allocation (Seoul Administrative Court 2015GuHap55462)
'18.05.04.	• 2nd trial verdict for 1st allocation (Seoul High Court 2017Nu38760)
'18.09.13.	• 3rd trial verdict for 1st allocation (Supreme Court 2018Du46230)
'18.12.28.	• 2nd carbon credit allocation (for '15-'17, reflecting the result of 1st litigation) • Other 6 companies filed lawsuit again(2nd), because they did not received more carbon credits
'20.06.05.	• 1st trial verdict for 2nd allocation (Seoul Administrative Court 2019GuHap60301)
'21.07.22.	• 2nd trial verdict for 2nd allocation (Seoul High Court 2020Nu46907)
'21.11.11.	• 3rd trial verdict for 2nd allocation (Supreme Court 2021Du48038)
'22.03.28.	• 3rd carbon credit allocation (for '15-'17, reflecting the result of 2nd litigation) • Other 6 companies filed lawsuit again(3rd), because there were still remaining issues
'23.01.13.	• 1st trial verdict for 3rd allocation (Seoul Administrative Court 2022GuHap65474)

3.2 1st Litigation

The 1st litigation was mainly about revealing manufacturer A's trick. It had old facilities that had been shut down for long time due to economic inefficiency. In 2013, manufacturer A remodelled the old facility in order to emit greenhouse gas again, regardless of product efficiency. As a result, its greenhouse gas emissions for the past three years including 2013 were calculated to be higher than the original situation. Based on these inflated emissions and the GF method, more emission permits were allocated to manufacturer A in 2014.

This is because the competent authority classified A's remodelled facility as a new facility and included its greenhouse gas emissions when applying the GF method. In contrast, the court ruled that remodelling a closed facility is NOT the same as opening a new facility. This means that greenhouse gas emitted from a remodelled facility must be excluded from the calculation of emission permit allocation. The 1st allocation was cancelled by court ruling, and this decision was confirmed after an appeal and appellate trial.

3.3 2nd Litigation

In December 2018, the competent authority allocated the emission permits again, reflecting the court ruling in the 1st lawsuit (hereinafter referred to as **"2nd allocation"**). But the result was almost unchanged and manufacturers B through G filed a 2nd lawsuit. This is because the government revised the regulation. The original guideline that applied at the 1st allocation was stated as below:

- "New establishment" refers to the physical addition of an emission facility that conducts greenhouse gas emission activities independently of existing facilities for production activities and reports emissions separately in the statement.

And then the following text was added to the guideline revised in July 2018:

- However, if the classification of greenhouse gas emission activities changes because the allocation target company remodels the emission facility and changes the raw materials or fuel, the Minister of Environment may consider the emission facility to be closed before the modification and to be newly established after the modification.

The original guideline defined "new establishment" as "physical addition." In the 1st lawsuit, the court ruled that manufacturer A's remodelled facility is NOT a "new facility," referring to this original guideline. However, the government revised the guideline in July 2018, just before the 2nd allocation. The revised guideline expanded the scope of "new establishment" to "remodelling and changes to raw materials or fuel." For the 2nd allocation, the competent authority followed the new guideline. Because of this, manufacturer A's "remodelled facility" was still classified as a "new facility," and then manufacturers A through G were allocated almost the same emission permits.

The key issue of the 2nd lawsuit was whether the competent authority was able to apply the new guideline (revised in 2018), which had not existed during the period of original allocation in 2014. As a result, the court ruled that the original

guideline that was effective for the 1st allocation should also be applied to the 2nd allocation that replaced the original. This lawsuit, which the competent authority lost again, was confirmed after an appeal and appellate trial.

3.4 3rd lawsuit (in progress)

In March 2022, the competent authority allocated the emission permits again, reflecting the court ruling in the 1st lawsuit (hereinafter referred to as **"3rd allocation"**). This time, manufacturer A's emission permits were reduced, but there were still remaining issues.

With regard to the 3rd allocation, the calculation of "estimated emission" became an issue. It is calculated based on the average emissions over the past three years. The competent authority assumed that there was no data for 2011 and 2012 emissions by manufacturer A, and then calculated the "estimated emission" based on the 2013 data. It means that the average of {N/A, N/A, 1} is 1.

However, in the 3rd lawsuit, the ruling of the first trial was that the "estimated emission" should be calculated as one-third of the 2013 data, assuming that 2011 and 2012 data are zero. This judgment indicates that the average of {0, 0, 1} is 1/3. The competent authority appealed to the Seoul High Court, and the second trial is now in progress.

4. Conclusion

ETS is a system for internalizing the externalities of greenhouse gas emissions. Without it, companies would be able to emit as much greenhouse gas as they want without paying any costs, but this would come at the expense of humanity as a whole. Therefore, by assigning emission permits to individual companies and requiring them to pay for emission permits if they want to emit more, greenhouse gas cannot be emitted for free.

However, if the allocation of emission permits is not done accurately and fairly, it can undermine the entire system. As the case study presented in this paper shows, it is very difficult to allocate emission permits accurately and fairly in the real world. These practical challenges lead to legal disputes. They can also create incentives for companies to focus on getting more emission permits by cheating rather than developing carbon reduction technologies.

Distortions due to inaccuracies in the data may be greater in the BM method than in the GF method. In the case of the cement manufacturers, the GF method allocates credits to companies based on their past greenhouse gas emissions. In comparison, the BM method requires more extensive data and is more susceptible to errors because the unit of emissions is not a company but an industrial area.

"The devil is in the details," as the saying goes, and for the ETS to work, details must not be overlooked. This applies in particular to calculating the right amount of greenhouse gas emissions for each nation, industry, and company, which requires the use of government data, private data, external experts, and the watchful eye of competitors.

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