

# Legal Issues Regarding the Legislation for an Emission Trading System in Korea\*

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## Abstract

*This paper will study the potential legislative issues that can be raised in the process of creating an emission trading system.*

*First, the constitutionality of carbon credits can be questioned in relation to the freedom to choose an occupation and property rights. Second, Emission trading might be regarded as a way of granting the right to pollute, which is a violation of environmental rights. Third, the "polluter pays principle" (PPP), stipulated under the Framework Act on Environmental Policy, might be inconsistent with an ETS targeting only the upstream pollution sources.*

*Fourth, the problem of determining the period(short-term or long-term) and the reduction amount and the target gases. Fifth, to whom the emission credits should be allocated. Sixth, to choose between different methods to allocate emission allowances: free allocation (grand-fathering and benchmarking (baseline and credit)) and paid allocation (auctioning).*

*Seventh, given the regulatory gap on emissions among countries, Korea should come up with countermeasures against the negative impact on the international competitiveness of its domestic industry and potential carbon leakage in the world that could be caused by domestic regulations.*

*Eighth, it is crucial to be open to other various policy tools such as command-and-control, environmental taxes, subsidies, support for technology development and the readjustment of the social infrastructure, and to adopt a policy-mix method that uses a combination of these various tools.*

*Ninth, the regulatory consequences of implementing an ETS can be a huge burden on those in the industry. To minimize the regulatory burden, the following legal basis will be needed to allow a gradual implementation of the regulation.*

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## I. The Background and History of the Emission Trading System in Korea

Korea is currently the 10th largest greenhouse gas emitter in the world.<sup>1)</sup> Its greenhouse gas (GHG) emissions have sharply increased since the 1990s, which can largely be attributed to its manufacturing-based economic growth. Between 1990 and 2005, GHG emissions in Korea increased by 86.8%, which was the largest increase in emissions during that period among the OECD countries.<sup>2)</sup> This stems from the fact that the Korean economy has an energy-intensive industrial structure and a high level of dependency on fossil fuels. As of 2006, energy-intensive industries including steel, cement and the petrochemical industries accounted for 8% of the entire industrial structure in Korea,<sup>3)</sup> far exceeding both Japan and the United States, where these industries accounted for 4.6% and 3.1%, respectively.<sup>4)</sup> In addition, the average fuel efficiency of domestically manufactured and sold vehicles was 11 km/l in 2007, which is only 70% compared to that of Japanese vehicles.<sup>5)</sup> Meanwhile, the development of the green industry and technology, which is pivotal for GHG emissions reductions, is rather poor in Korea. For example, the distribution rate of new and renewable energy sources was a mere 2.37% in 2007, the lowest among OECD member states.<sup>6)</sup>

Since climate change is a global environmental issue, global cooperation plays a vital role in its resolution. Major emitting countries are working

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1) Editorial: Achieving Overwhelming Goal of Greenhouse Gas Reduction, MAEIL BUSINESS NEWSPAPER, available at <http://media.daum.net/foreign/englishnews/view.html?cateid=1047&newsid=20091118104716996&p=mk>.

2) State Strategy to Green Growth, available at [http://www.greengrowth.go.kr/download.ddo?fid=bbs&bbs\\_cd\\_n=12&bbs\\_seq\\_n=149&order\\_no\\_n=2](http://www.greengrowth.go.kr/download.ddo?fid=bbs&bbs_cd_n=12&bbs_seq_n=149&order_no_n=2) p.12.

3) *Id.*

4) *Id.*

5) The Press Release from the Ministry of Knowledge Economy, available at <http://blog.daum.net/mocie/15610034>.

6) Economy Focus 1, INVEST KOREA JOURNAL (Issue Nov-Dec 2009), available at [http://www.ikjournal.com/InvestKoreaWar/work/journal/content/content\\_main.jsp?code=4650104&select1=465&select2=4650104&query=&gubun=](http://www.ikjournal.com/InvestKoreaWar/work/journal/content/content_main.jsp?code=4650104&select1=465&select2=4650104&query=&gubun=); State Strategy to Green Growth, available at [http://www.greengrowth.go.kr/download.ddo?fid=bbs&bbs\\_cd\\_n=12&bbs\\_seq\\_n=149&order\\_no\\_n=2](http://www.greengrowth.go.kr/download.ddo?fid=bbs&bbs_cd_n=12&bbs_seq_n=149&order_no_n=2) p.13.

together to develop and maintain an international framework under which they share the roles and responsibilities for fighting climate change. Though Korea is not bound by the mandatory emission cuts of the Kyoto Protocol, it can no longer free-ride on the efforts of other nations under the excuse of being a developing country, given that Korea is eager to improve its position in the international community and has a high dependency rate on trade. In fact, the international community seems hopeful that Korea will exert greater efforts in reducing GHG emissions compared to other developing nations. Moreover, the possibility that Korea may be included among Annex I countries in the post-Kyoto Protocol era cannot be ruled out.

Under these circumstances, the Korean government has begun to develop legislation for reducing GHG emissions. The government has embraced the “low-carbon, green-growth” paradigm as the new national development framework. This framework aims to create new growth engines and job opportunities by moving away from the carbon-based development strategy and instead moving towards green technology and clean energy. The new paradigm also means the achievement of sustainable development by reducing GHG emissions and environmental pollution. The government has drafted the Basic Act on Low Carbon and Green Growth [Jeotanso Noksaekseongjang Kibonbeopan] which is currently under deliberation in the National Assembly. Article 46 of the Act specifies the basis for an emission trading system (ETS) as follows:<sup>7)</sup>

Article 46 (Introduction of Cap-and-Trade System, etc.)

① In order to prepare for the globally expanding emission trading market and to efficiently reduce greenhouse gases through a market mechanism, the government may implement a system, etc.; the system sets a limit or cap on the amount of a greenhouse gas that can be emitted and allows the emission allowance to be traded (hereinafter referred to as a “cap-and-trade system”).

② The government shall take into account international

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7) JEOTANSO NOKSAEKSEONGJANG KIBONBEOPAN [Basic Act on Low Carbon and Green Growth], Nat'l Assembly, Draft No. 3967 (Feb. 27, 2009), available at [http://likms.assembly.go.kr/bill/jsp/BillDetail.jsp?bill\\_id=PRC\\_G0191002X2U71O8S2Q0M3U0I6B9A4](http://likms.assembly.go.kr/bill/jsp/BillDetail.jsp?bill_id=PRC_G0191002X2U71O8S2Q0M3U0I6B9A4).

negotiations relating to climate change, international competitiveness, etc. when implementing a cap-and-trade system.

③ Allocation methods, the registration and management of greenhouse gas emission allowances, and the establishment and operation of an exchange for implementing a cap-and-trade system shall be prescribed by separate acts.

Moreover, according to Korea's Strategy and Five-Year Plan for Green Growth set by the Presidential Committee on Green Growth on July 6, 2009, the government will implement a trial cap-and-trade system until 2011 and gradually introduce the system in 2012.<sup>8)</sup>

The cap-and-trade system, however, has gained only limited support. Those in the industry argue that the ETS will discourage new investments, hike costs of production, and drive the manufacturing sector abroad. They added that the government should provide more support to enhance national competitiveness instead of imposing regulation on the industry.<sup>9)</sup> On the other hand, environmental groups criticized the government, asserting that the word "etc." in paragraph (1) of Article 46 of the Basic Act allows the introduction of methods other than a cap-and-trade system.<sup>10)</sup>

This paper will study the potential legislative issues that can be raised in the process of creating an emission trading system, based on the background behind the introduction of the ETS.

## II. Criteria and Constraints in Designing an Emission Trading System

Two factors should be considered when designing an emission trading system: first, the regulative ideal or standard that controls the system design;

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8) Myung-je Chung, *Gov't to Inject W107 Trillion into Green Growth Sector for 5 Years*, KOREA IT TIMES, July 9, 2009, available at [www.greengrowth.org/download/2009/news/Korea-inject-107-trillion.pdf](http://www.greengrowth.org/download/2009/news/Korea-inject-107-trillion.pdf).

9) Ellee Park, *Tteugeoun Gamja 'Chongryangjehan Tansobaechulkwon Georaeje' Nollan Gayeol [Heated debate over 'cap-and-trade system']*, MEDICAL TODAY, June 15, 2009, available at <http://www.mdtoday.co.kr/mdtoday/index.html?no=86166>.

10) *Id.*

and second, national conditions that restrict the design of such a system. The former is an aggressive and universal factor while the latter is a passive and parochial factor.

First, we need to consider the standard that controls the design phase of the ETS. Various policy tools are available for the policy goal of cutting GHG emissions. In order to select the ETS, its effectiveness in reducing GHG emissions should be guaranteed. International environmental treaties such as the United Nations Framework Convention on Climate Change and the Kyoto Protocol are not self-executing treaties that automatically take effect in Korea as domestic law. Instead, each signatory must enact and enforce domestic laws to meet its obligations under the treaty. Moreover, once a country signs and ratifies a treaty, it cannot avoid implementing and complying with the treaty obligations because of its domestic conditions. Accordingly, it is of utmost importance that Korea, which is expected to be a member of the post-Kyoto Protocol, design an effective ETS that guarantees successful achievement of the reduction targets.

Another important concept in designing an ETS is cost-effectiveness. Under the ETS, an emitter must purchase credits to emit carbon so that the entire community can meet the reduction target at a low cost. By putting a price on emissions, the ETS encourages emitters to search for inexpensive alternatives to purchasing carbon credits. Then, through the carbon credit trade, emitters may purchase carbon credits from other emitters who have reduced carbon emissions at a lower cost. As such, the ETS aims to promote a cost-effective way of cutting GHG emissions. The cost-effectiveness approach can be understood as attaining the goal of emissions reduction at a low cost by guaranteeing emitters flexibility when choosing GHG emissions reduction methods. In addition, the focus on cost can encourage technological development. As the price of carbon credit increases, highly efficient technologies will be introduced and by setting a proper long term goal, further technological development will be stimulated.

Next, we will review the passive factors that restrict the ETS. From an economic perspective, Korea's heavily coal-intensive industrial structure prevents an immediate introduction of an ETS. Therefore, the gradual adoption of an ETS must be considered. Moreover, there is no emission-related statistic data, which is necessary for the implementation of an ETS. Without access to such data, designing a regulatory system and providing

subsidies will be impossible. Considering that data collection requires much time and cost, various policy measures for facilitating data collection need to be legislated. For instance, regulations that protect companies' confidential information need to be legislated.

From a socio-cultural perspective, since Koreans have a strong sense of protecting their rights, there may be a conflict in the initial distribution of carbon credits. Korean society is no longer perceived as a non-litigious society, as evidenced by the rising number of lawsuits, including civil and administrative cases.<sup>11)</sup> In the past, the distribution of carbon credits may not have caused any difficulty, since it could be carried out through an agreement between an authoritarian government and passive companies. However, today, highly self-conscious citizens, grass-root civic groups and bold companies are ready to fight for their rights. Especially considering the redistribution effects of an ETS, we can imagine the massive social impact that these controversies will bring about. Therefore, in designing an ETS, it is pivotal that the interested parties participate in the legislation process and all parties share the responsibilities fairly, preventing any unfair attainment of initial credits. Also, a transition period should be granted before implementing a full-scale ETS in order to minimize the adverse effects.

From a legislative perspective, the Korean Constitution declares that "all people have the right to live in a healthy and pleasant environment."<sup>12)</sup> It is well-known that, in Europe, there is a heated debate over the constitutionality of carbon credits in relation to the freedom to choose an occupation and property rights. In the same vein, emission trading may be regarded as a way of granting the right to pollute, which is a violation of environmental rights in Korea. In addition, the "polluter pays principle" (PPP) is stipulated under the Framework Act on Environmental Policy.<sup>13)</sup> Accordingly, an ETS targeting upstream pollution sources would be inconsistent with the PPP. Furthermore, the ETS has several factors that conflict with other environmental adminis-

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11) You can find statistics from [http://file.scourt.go.kr//AttachDownload?path=001&seqnum=39&gubun=10&file=1248336732962\\_171212.pdf&downFile=2.사건의추이\(누년비교\).pdf](http://file.scourt.go.kr//AttachDownload?path=001&seqnum=39&gubun=10&file=1248336732962_171212.pdf&downFile=2.사건의추이(누년비교).pdf).

12) DAEHANMINGUK HEONBEOP [Constitution of Korea], art. 35(1) (1987), *translated at* <http://english.court.go.kr/home/english/welcome/republic.jsp> (last visited Nov.13, 2009).

13) Article 7 of FRAMEWORK ACT ON ENVIRONMENTAL POLICY. You can search the full text at <http://elaw.klri.re.kr/>.

trative laws and regulations. To solve such problems, careful fine-tuning of the provisions is required and a separate regulation on the execution and management of the ETS should specify the implementation procedures of the ETS. For example, a task force or procedure can be established for resolving conflicts between the ETS and other environmental administrative laws.

### III. Legal Issues in Designing an Emission Trading System

Legal issues in designing the ETS can be divided into internal issues which constitute the details of the ETS and external issues which determine the success of the ETS.

The most basic internal issue is to determine “how much of what should be reduced until when.” In other words, the period (short-, mid-(post-Kyoto period, 2013-2020) and long-term (2021-2050)), the reduction amount and the target gases (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, SF<sub>6</sub>) should be decided. With regard to these factors, rules on compliance with reduction obligations such as the compliance period, depreciation obligations and measures for non-compliance should be in place. Such rules on compliance are of utmost significance because they serve as the precondition for emission rights and trade. On August 4, 2009, the Korean government announced its goal to reduce GHG emissions by 30% until 2020, relative to the so-called “business as usual” (BAU) scenario.<sup>14)</sup> The BAU refers to the level of GHG emissions the country is forecasted to reach by a certain year if emissions grow at their current pace. The social debate with regard to this announcement shows the importance of deciding the reduction amount. Above all, a social agreement should be sought.

Another issue is deciding to whom the emission credits should be allocated. Once the allocation subjects are decided, industrial sectors and types of businesses to be covered by the ETS and their portions of the total emissions in Korea can be determined. For instance, it must be determined whether

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14) The Press Release from the Presidential Committee on Green Growth, *available at* [http://www.greengrowth.go.kr/download.ddo?fid=bbs&bbs\\_cd\\_n=17&bbs\\_seq\\_n=26&order\\_no\\_n=3](http://www.greengrowth.go.kr/download.ddo?fid=bbs&bbs_cd_n=17&bbs_seq_n=26&order_no_n=3).

those in the upstream – including producers, importers and sellers of fuels – or those in the downstream – including energy users (producers or users of power) – can receive the emission credits. Once the allocation subjects of the emission credit are decided, the method of allocating those credits should be determined in a “fair” manner. Fairness is crucial for the success of the ETS since the participants will support the system only when it is implemented in a fair way.

There are two different methods to allocate emission allowances: free allocation (grand-fathering and benchmarking (baseline and credit)) and paid allocation (auctioning). The above-mentioned issues relating to the Constitution and the PPP will be discussed with regard to the allocation methods. Measures against those who take early action should be sought as well. Also, issues regarding new business operators and facility closure need to be reviewed. These issues depend on the legal definition of property rights. For instance, if the emission credit is regarded as a civil liberty, there shall be no barriers for new businesses to enter the market, while if the credit is regarded as a property right, a company which shuts down its facilities should receive emission credits equivalent to the reduced emission.

The internal infrastructure for implementing the ETS includes the establishment of a registry for emission credits and the adjustment of rules on “monitoring, estimating and reporting of emissions” and “verification of emissions” for measuring the exact amount of emissions. This issue also depends on the legal definition of emission credits. For example, it should be determined whether the credit shall be regarded as movable property or immovable property, and if it is regarded as movable property, whether the establishment of a right of pledge shall be permitted or not.

In addition to designing of the ETS, cost-alleviating measures such as banking, borrowing, price caps, overseas credits, etc. should be established by taking into account the adverse effects that price spikes and fluctuations can have on the economy. This is to promote price stability and avoid a sudden rise in costs, while maintaining the goal of reducing GHG emissions, by introducing measures that flexibly increase the supply of emission credits in the event of a price spike or an imbalance between supply and demand.

In addition, given the regulatory gap on emissions among countries, Korea should come up with countermeasures against the negative impact on the international competitiveness of its domestic industry and potential carbon



leakage in the world that could be caused by domestic regulations. In this regard, free allocation to certain sectors and adjustment of reduction obligations among countries (so-called “border adjustments”) may be considered.

Lastly, possible interdependencies between domestic and international ETSs should be reviewed. International trade of emission credits would cause a short term outflow of funds to countries that can reduce emissions at a low cost. Such a problem, if the amount involved is enormous, could lead to a political issue. Moreover, the increase of trade volume and participants due to global linkages may undermine the control of each government. Hence, rules that can be applied to international emission credit transactions should be established.

External factors that will serve as the basis for the ETS are two-fold: one is rules on accounting and taxation, which will regulate the allocation and trade of emission credits. The other is the establishment of a foundation that facilitates transactions and an appropriately functioning market, so that efficient reduction of emissions can be achieved through price signals. Accounting and taxation standards are highly likely to converge globally as ETSs become a global system. Any divergence from international accounting standards should be eliminated by observing the developments at the International Accounting Standards Board (IASB). For the facilitation of emissions trade, it is important that sufficient participants are secured and institutional support is provided to encourage the creation of brokers. Additionally, measures should be taken to secure the credibility and stability of the transactions.

#### **IV. Some Proposals: Policy Mix and Incremental Implementation**

As mentioned previously, it is necessary to jump over various legal hurdles in order to implement an ETS in Korea. To that end, it is crucial to be open to other various policy tools such as command-and-control, environmental taxes, subsidies, support for technology development and the readjustment of the social infrastructure, and to adopt a policy-mix method that uses a combination of these various tools. For instance, a mix of

command-and-control and the tax system would be useful for monitoring and verifying a large number of small-sized emitters. Also, even when the cost of purchasing emission allowances is cheaper than the cost for reducing emissions, subsidies can be offered for the goal of nurturing the technologies and industries which are essential for future reductions.

The regulatory consequences of implementing an ETS can be a huge burden on those in the industry. To minimize the regulatory burden, the following legal basis will be needed to allow a gradual implementation of the regulation.

In the first phase, the industry should be able to voluntarily come up with an action plan. Such voluntary action plans would be cost-effective and politically acceptable, due to their autonomous nature. If there is concern that this would result in *laissez-faire* in the industry, a voluntary agreement could be an alternative. A voluntary agreement refers to an agreement that the industry can enter into with the government, under which companies would submit their GHG emissions reduction plans to the government. Then the government or a third party would manage, approve and evaluate the reduction process.

The second phase combines a tax system on GHG emissions – mainly a carbon tax – and the voluntary agreement. For the successful operation of the agreement, incentives are needed to encourage companies to voluntarily participate. Simultaneously, there should be disincentives for companies that fail to meet their reduction targets as arranged under the agreement. To establish such an incentive system, first, taxes would be imposed on GHG emissions while participants to the agreement receive tax reductions. Second, those who fail to comply with the agreement will be deprived of the tax reduction or be levied a heavier tax. The tax system alone may be insufficient since it is difficult to set a specific tax rate. In this regard, a combination of the tax system with the voluntary agreement can help set the tax rate. As a result, a national plan for cutting GHG emissions can be successfully implemented.

Under the third phase, signatories to the agreement can take part in emission trading. Tax reductions for the signatories may hamper the efficient distribution of resources. Such a problem can be minimized by allowing them to trade emissions. The combination of an emission trading system and the agreement can help avert the allocation issues and promote political acceptability in the form of an agreement. Those who emit moderate or large

amounts of greenhouse gases can turn from the second phase to the third phase, while those who emit small amounts can be subject to tax incentives. This is because substantial costs will be incurred for monitoring compliance with emission limitations.

In addition, it would be appropriate to employ command-and-control and subsidies in a limited manner, such as when technological innovation is called for.

KEY WORDS: the constitutionality of emission trading system, carbon leakage, emission allowances, grand-fathering, benchmarking, baseline and credit, auctioning, polluter pays principle, property rights, the right to pollute, Environmental rights

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