

Implications for Linking South Korea's Emissions Trading Scheme

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Abstract

Anthropogenic global warming is unequivocal and requires significant large-scale efforts by countries to avoid catastrophic long-term consequences. The international legal framework for climate change is based on the United Nations Framework Convention on Climate Change and the Kyoto Protocol. One policy mechanism that countries are increasingly looking to use in order to reduce greenhouse gas emissions is the emissions trading. The linking of emissions trading schemes between countries provides economic benefits, but there are also considerable risks. The legal structure of the links impacts not only the effectiveness of the joined programs, but will inform further linking. This paper focuses on Korea's emission trading scheme and the legal issues of linking with the schemes of other countries. In particular, the paper will focus on the legal governance of linking, and the increasing complexities that arise as more countries seek to link.

Key words: Emissions trading, Climate change, International carbon market, Linking

I. Introduction

In May 2012, Korea enacted a law establishing Korea's emissions trading scheme. Korea is the first developing country to establish an emissions trading scheme.¹ The emissions trading scheme will help Korea meet its non-binding pledge of reducing its greenhouse gas emissions 30 percent below business-as-usual emissions by 2020.²

Several emissions trading schemes are already in operation around the world, and many other countries and sub-national governments are looking to emissions trading schemes as a policy mechanism to reduce greenhouse gases. Linking emissions trading schemes can provide economic and mitigation benefits. Most technical barriers to linking are not difficult to overcome, but the political design elements of emissions trading schemes may impede realization. Emissions trading schemes are the byproduct of negotiations and the influence from domestic constituencies, and thus, changing any design aspects to facilitate linking will necessarily require gaining input and consent again. In addition, as links between emissions trading schemes begin to proliferate, the complexity of managing the links we become increasingly complex.

This paper looks at the legal issues of linking emissions trading schemes and the implications for Korea's newly established national emissions trading scheme. Part I of this paper describes the economic rationale behind linking emissions trading schemes, along with important risks that must be considered. Part II reviews the structural legal characteristics of linking between emissions trading schemes and the options available for countries to use. A variety of forms and types of links can be established between emissions trading schemes, both explicitly and implicitly. Part III describes the important parts of Korea's emissions trading law with a focus on those de-

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1. Under the United Nations Convention on Climate Change, the Republic of Korea is a non-Annex I country and is considered a developing country. United Nations Framework Convention on Climate Change, June 4, 1992, 1771 U.N.T.S. 107, S. Treaty Doc. No. 102-38; Rep. of the Intergovernmental Negotiating Comm. Convention on Climate Change on the Work of the Second Part of Its Fifth Session, U.N. Comm. on Sustainable Dev., Apr. 30 - May 9, 1992, U.N. Doc. A/AC.237/18 (Part II)/Add.1; 31 ILM 849 (1992) [hereinafter "UNFCCC"].
 2. United Nations Framework Convention on Climate Change, June 4, 1992, 1771 U.N.T.S. 107, S. Treaty Doc. No. 102-38 app. (2010) (Republic of Korea's Note Verbale Including Nationally Appropriate Mitigation Actions of Developing Country Parties) (2010).

sign elements which may be an issue for linking with other emissions trading schemes. Part IV reviews some of the other major emissions trading schemes and the legal mechanisms those schemes use for linking. In addition, the article will posit some ideas on how links between Korea's emissions trading scheme and the case examples may be designed. Part V looks at the global governance or emissions trading, particularly, the possibility of whether linking of emissions trading schemes will lead to a new global governance model, or a fractured system. It will note that, as the complexity of linked systems increases, the governance of those links will become a more important issue.

II. Economic Benefits and Risks of Linking Emissions Trading Schemes

Linking two emissions schemes will have a number of effects that should be considered carefully by the prospective partner countries. Broadly speaking, when emissions trading schemes are linked, the trading units of one scheme can be used by a participant in another scheme for compliance purposes. Under the economic theory, linking emissions trading schemes will increase the overall efficiency of the linked schemes. These effects will depend upon the architecture and design aspects of both the link and the emissions trading schemes themselves.³ At the same time, the design of an emissions trading scheme is often made after careful political considerations of domestic concerns and input from various domestic constituencies.⁴ As a result, a government that is looking to link with other emissions trading schemes must negotiate such links with these interests in mind.

There are primarily three benefits that arise from linking emissions trading schemes. First, linking emissions trading schemes will lower the cost of achieving the emission reduction goals of all partner countries while mini-

3. Int'l Emissions Trading Ass'n, IETA, *IETA Report on Linking GHG Emissions Trading Systems* (2007) [hereinafter "IETA Report"], available at http://www.hks.harvard.edu/fs/rstavins/Monographs_&_Reports/IETA_Linking_Report.pdf (last visited Feb. 8, 2013).

4. See Timo Behr & Jan Martin Witte, Global Pub. Pol'y Inst., *Towards a Global Carbon Market? Potential and Limits of Carbon Market Integration*, available at http://www.gppi.net/fileadmin/gppi/GPPiPP7-Carbon_Markets.pdf (last visited Feb. 8, 2013).

mizing the cost of those reductions.⁵ This is particularly true if one country has high costs of abatement while the second country has low costs of abatement.⁶ Second, linking emissions trading schemes will broaden the overall market, thereby reducing price volatility and improving market liquidity.⁷ Third, linking emissions trading schemes can reduce carbon leakage—the risk of carbon emissions shifting from a country to another to avoid reduction costs—between the two linked systems.⁸

There are also two broad risks that must be considered when linking emissions trading schemes. First, the environmental integrity of the linked schemes must be maintained.⁹ If the impact of linking would lead to an increase of emissions compared to a scenario without such linking, then the environmental integrity of the schemes would be compromised.¹⁰ Second, countries should avoid the negative economic and distributional impacts that could be created by linking emissions trading schemes.¹¹ Some of these concerns include windfall profits, environmental justice and protecting the international competitiveness of the native industries.

III. Legal Options for Linking between Emissions Trading Schemes

“Two emissions trading schemes are linked if one country’s allowance can be used, directly or indirectly, by a participant in the other country’s scheme

5. See Intergovernmental Panel on Climate Change, IPCC, IPCC Third Assessment Report, *Climate Change 2001: Mitigation* 425 (2001), available at http://www.grida.no/publications/other/ipcc_tar/. See also, Judson Jaffe *et al.*, *Linking Tradable Permit Schemes: A Key Element of Emerging International Climate Policy Architecture*, 36 *Ecology L.Q.* 789, 797 (2009), available at <http://heinonline.org/HOL/LandingPage?collection=journals&handle=hein.journals/eclawq36&div=31&id=&page=>.

6. Jaffe *et al.*, *supra* note 5.

7. *Id.*

8. *Id.*

9. Wolfgang Sterk *et al.*, *Prospects of linking EU and US Emissions Trading Schemes: Comparing the Western Climate Initiative, the Waxman-Markey and the Lieberman-Warner Proposals* 9 (Apr. 24, 2009) (on file with Climate Strategies), available at <http://www.climatestrategies.org/research/our-reports/category/33/143.html>.

10. *Id.*

11. *Id.*

for compliance purposes.”¹² The form of the link can be achieved in several different ways. First, the link can be either direct or indirect. Second, the link can be either formal or informal.¹³ Finally, the governance of the link can be either centralized or decentralized.

Direct linkage can come in two forms: unilateral or bilateral/multilateral. Under a unilateral link, emissions by a foreign system can be imported and used for compliance purposes in the local emissions trading scheme, but not vice versa. In a direct bilateral or multilateral link, participating countries recognize allowances from the others' systems, allowing allowances to flow freely in two or more directions.

Indirect links occur when two schemes are linked to a third scheme but not to each other: for example, a United States' emissions trading scheme is linked to the European Union's emissions trading scheme and Australia's emissions trading scheme, but the European Union and Australia do not have such a link between each other. In this case, there would be an indirect link between the European Union and Australia. Indirect linking is an important consideration because it can also occur in linking with credit systems. This includes either the credit systems established under the United Nations Convention on Climate Change (“UNFCCC”), such as the Clean Development Mechanism (“CDM”), or other credit systems created privately or through bilateral/multilateral partnerships.

Links between schemes can also be formal or informal. The most formal method is a legally binding agreement between two countries that establishes the link between the two systems. Because the level of formality is very high, the process for establishing a link through a treaty can be daunting. Alternatively, linking between two schemes can be done in an informal manner. This can include some sort of political declaration or memorandum of understanding, which would not have a legally binding effect. A unilateral link does not require a formal agreement between the two countries and can be implemented solely through domestic legislation. Two countries that establish unilateral links with each other are in effect creating a reciprocal unilateral

12. Org. Econ. Co-operation & Dev., OECD, *Harmonisation Between National and International Tradeable Permit Schemes*: CATEP Synthesis Paper (Erik Haites) (2003).

13. See generally Michael A. Mehling, *Bridging the Transatlantic Divide: Legal Aspects of a Link Between Regional Carbon Markets in Europe and the United States*, 7 *Sustainable Dev. L. & Pol'y* 46 (2007).

link.¹⁴

A final aspect of linking that has received less attention is the form of legal governance of the link. The governance can be more centralized or more decentralized. Two countries could enter into a formal legally binding agreement to link their systems, but leave the governance of the link and trading schemes mostly or entirely at the domestic level. Alternatively, the treaty could include some mechanism for adjusting domestic schemes through a joint-operating committee or other means. Informal links are, by their nature, primarily decentralized; although governments can use some methods for co-operation and coordination, they would not be legally obligated to comply.

IV. Korea's Emissions Trading Scheme and Potential Impact on Linking

A. Background

To realize the vision of a “low carbon, green growth” economy, Korea undertook a study on its mitigation capabilities and in 2009, adopted its voluntary mid-term greenhouse gas reduction target—a reduction of emissions 30% below business-as-usual levels by 2020.¹⁵ Korea was the first non-Annex I country of the UNFCCC to set its reduction target voluntarily at the maximum recommended by the International Panel on Climate Change.

On April 14, 2010, the Framework Act on Low Carbon, Green Growth (“Framework Act”) entered into force. The Framework Act creates the legal basis for Korea’s transition to a low carbon, green growth economy. Among a large number of policies the government will pursue under the Framework Act, Article 46 of the Framework Act established the ability of the government to implement an emissions trading scheme in order to reduce greenhouse gas emissions.

Subsequently, the legislation—the Act on the Allocation and Trading of Greenhouse Gas Emissions Allowances (“Emissions Trading Act”)—passed the National Assembly with bipartisan support on May 2, 2012. The emissions trading scheme will begin operation in 2015, however, the Emissions

14. Mehling, *supra* note 13.

15. United Nations Framework Convention on Climate Change, *supra* note 2.

Trading Act will leave most of the actual design elements of the emissions trading scheme to be developed by the Korean Government through regulation.

The Korean Government also established the Enforcement Decree of the Act on the Allocation and Trading of Greenhouse Gas Emissions Allowances ("Presidential Decree"), which contains the specific rules and procedures for implementing and operating the emissions trading scheme that were not addressed by the Emissions Trading Act.

B. Fundamental Principles

Under the Emissions Trading Act, the Korean Government must ensure that the emissions trading scheme comports with the principles of the UNFCCC, the Kyoto Protocol, or subsequent agreements.¹⁶ This includes the Kyoto Protocol's successor agreement ("Kyoto II") that was agreed to by the Parties of the UNFCCC at the Doha Conference in 2012.¹⁷ This also will include any post-2020 agreement that the Parties to the UNFCCC are currently negotiating. Finally, the Korean Government must design the emissions trading scheme to protect the international competitiveness of Korea's various economic sectors.¹⁸ This includes not only protecting the trade-exposed or energy-intensive sectors, but also fostering the green growth sectors in order that there may be an increase in demand as a result of the emissions trading scheme.

In addition, the Korean Government shall ensure that the emissions trading scheme does not contravene the international standards, particularly with regards to the potential of linking Korea's emissions trading scheme with the international carbon markets.¹⁹ Only one specific requirement on linking to

16. On-sil-ga-seu bae-chul-gwo-nui hal-ttang mit geo-rae-e gwan-han beom-nyul [Act on Allocation and Trading of Greenhouse Gas Emissions Allowances], Act. No. 11418, May 2, 2012 (S. Kor.) [hereinafter "Emissions Trading Act"].

17. *Id.*; See also United Nations Framework Convention on Climate Change, Conference of the Parties Serving as the Meeting of the Parties to the Kyoto Protocol on Its Eighth Session, Decision 1/CMP. 8 (Nov. 26 – Dec. 7, 2012); Outcome of the Work of the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol on Its Sixteenth Session, U.N. Doc. FCCC/KP/CMP/2011/10/Add.1 (Mar. 15, 2012) [hereinafter "Kyoto II"].

18. Emissions Trading Act, *supra* note 16, art. 3(2).

19. *Id.* art. 3(5).

international carbon markets is actually in the Emissions Trading Act itself, which requires the Korean Government to allow the use of any offset credit created under the UNFCCC or relevant protocols.²⁰ Nevertheless, the Emissions Trading Act, with the foundational principles, clearly anticipates to link with other emissions trading schemes.

C. Master Plan and Commitment Period Plan

The Emissions Trading Act requires the Korean Government to create and periodically update two plans for the management of the emissions trading scheme. The first is the Master Plan, which will cover long and medium-term objectives of the emissions trading scheme. The Master Plan will review the current status and projections of Korea's emissions trading market, the international emissions trading markets, the foundational goals of Korea's emissions trading scheme, the operation of specific commitment periods, the changes in Korea's economy and the potential to link with other emissions trading schemes.²¹

Each Master Plan will cover the next ten years of the implementation of the Emissions Trading Act.²² However, the Korean Government is required to update the Master Plan every five years.²³ This means that when the first five years have elapsed, the Korean Government will review the remaining five years of the Master Plan and update according to the circumstances, and add the next five years into the new Master Plan. In addition, the Presidential Committee on Green Growth can approve exceptional changes to the Master Plan on an as-needed basis, including in response to results of international negotiations.²⁴

Within the Master Plan are the actual commitment periods. Each commitment period is governed by a commitment period plan ("Commitment Period Plan"). Each Commitment Period Plan will establish the method and manner of allocation of the emission allowances during that commitment period.²⁵

20. *Id.* art. 30; Kyoto II, *supra* note 17.

21. *Id.* art. 4.

22. *Id.*

23. *Id.*

24. Emissions Trading Act, *supra* note 16, art. 4(3)-(5).

25. Emissions Trading Act, *supra* note 16, art. 5.

Specifically, the Commitment Period Plan includes:

- Total emission allowances for the commitment period and for each compliance year within that commitment period;
- The economic sectors covered;
- Procedures and standards for allocating emissions allowances;
- Rules on reserve allowances;
- Rules on banking and borrowing allowances; and
- Guidelines for offsets.

As with the Master Plan, the Korean Government has the ability to revise a Commitment Period Plan when due to sudden changes in Korea's economy, the global economy, or significant advances in new technology.

The first and second commitment periods are established by the Emissions Trading Act itself; the first commitment period will run from January 1, 2015 to December 31, 2017, and the second commitment period from January 1, 2018 to December 31, 2020. Thereafter, each commitment period will be for five years.

D. Master Plan and Commitment Period Plan Impact on Korea Linking to Other Emissions Trading Schemes

The ability of the Korean Government to adjust the design elements of the emissions trading scheme either through adjusting the Master Plan or the Commitment Period Plan could impact the ability or effectiveness of linking Korea's emissions trading scheme to other emissions trading schemes.²⁶ For example, each Commitment Period Plan sets the allocation of allowances to companies based upon that company's business plan for the commitment period. Furthermore, adjustments of allocations of emission allowances due to changes in business plans will also impact linking. If a company makes significant changes to its business plans, it may apply for adjustments to its

26. IETA Report, *supra* note 3, at 59. The Presidential Decree anticipates revisions to the allocations of emissions allowances if the Commitment Period Plan is revised. See On-sil-ga-seu bae-chul-gwo-nui hal-ttang mit geo-rae-e gwan-han beom-nyul sihaengryeong [Enforcement Decree of the Act on the Allocation and Trading of Greenhouse Gas Emissions Allowances], Act No. 24180, Nov. 13, 2012 (S. Kor.) [hereinafter "Enforcement Decree"].

allocation for the current compliance year.²⁷ This includes the allocation of additional allowances based upon the expansion of facilities, the result of mergers or acquisitions, or when emissions increase more than 30% of the allocated allowances as a result of changes to the company's product line.²⁸

Furthermore, the ability of the Korean Government to adjust allowances could also be made based upon political concerns, particularly if the Korean Government tries to protect domestic industries from international competition.²⁹ By updating allowance allocations to reflect an industry or firm's industrial activity production level, the government effectively subsidizes that industrial activity.³⁰ Politically, other countries without ex-post updating of allowance allocations may be more hesitant to link to Korea's emissions trading scheme due to this choice of design.

In terms of governance, governments entering into bilateral or multilateral agreements to formally establish links will want to include rules or procedures for how the participating countries allocate allowances during each country's allocation period. Countries linking their emissions trading schemes should look to creating as firm a commitment as possible on how their caps should develop over time.³¹ However, if the link is informal, this is very difficult to achieve, since countries would be under no obligation to establish or adjust emission limits under common rules or standards. Even a formal method for joint management of caps may be unappealing to countries, since it transfers governance of the cap from domestic lawmakers to an international body under the international agreement.

E. Safety Value Measures (Banking, Borrowing, and Stability Measures)

The Emissions Trading Act provides three statutory means for the Korean Government to provide stability to prices and cost containment—banking,

27. Emissions Trading Act, *supra* note 16, art. 16.

28. Enforcement Decree, *supra* note 26, art. 22.

29. IETA Report, *supra* note 3, at 59.

30. M.J. Mace *et al.*, Found. for Int'l. Envtl. Law and Dev. in cooperation with Inst. for European Envtl. Pol'y, Final Report, *Analysis of the Legal and Organisational Issues Arising in Linking the EU Emissions Trading Scheme to Other Existing and Emerging Emissions Trading Schemes* (World Resources Inst. 2008) [hereinafter "WRI Report"].

31. Behr & Witte, *supra* note 4, at 42.

borrowing, and price stability measures. These design choices have implications for the ability to link to other emissions trading schemes.

1. Banking

The Emissions Trading Act allows a holder of emissions allowances to carry over any amount of allowances from one commitment year to the next commitment year within the same commitment period.³² In addition, the Ministry of Environment must approve of any banking from one commitment period to the next commitment period.³³ The obligation is on the allowance owner to apply for the banking approval for the specific allowances; allowances are not automatically banked.³⁴

Different rules on banking between emissions trading schemes may create market distortions.³⁵ Entities in the more rigorous scheme may seek to use the banking provisions of the more generous scheme.³⁶ In addition, banking can become a problem if there is an over-allocation of allowances.³⁷ The ability to bank unlimited allowances has recently been recognized as a potential problem for the European Union's emissions trading scheme, since over-allocation (combined with the financial crisis and recession of 2009) has led to an abundance of allowances that can be banked for future commitment periods.³⁸ This will lead to a lower allowance prices in the long run, reducing the incentive to invest in projects which reduce greenhouse gas emissions.

Korea's emissions trading scheme is more restrictive in its banking from one compliance period to the next compliance period than other emissions trading schemes.³⁹ If linked to a more generous scheme, the Korean Govern-

32. Emissions Trading Act, *supra* note 16, art. 28.

33. *Id.* art. 28(1).

34. Enforcement Decree, *supra* note 26, art. 38.

35. WRI Report, *supra* note 30, at 61.

36. *Id.*

37. *Id.*

38. See e.g. Damien Morris & Bryony Worthington, *Cap or Trap? How the EU ETS Risks Locking-in Carbon Emissions* (Sandbag 2010).

39. The European Union allows unlimited banking of allowances. 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, 2003 O.J. (L 275) 32 [hereinafter "EU Directive"].

ment would fall under pressure to liberally allow banking from one period to the next in order to allow Korean companies the same status as participants from other countries. In other words, linking with an emissions trading scheme with unlimited banking would undermine the political basis for having an application-and-approval methodology as set out in the Korean emissions trading scheme.

2. Borrowing

A covered entity may borrow some of the allowances allocated to the future compliance years within the same commitment period.⁴⁰ In order to borrow allowances, the covered entity must need the allowances to make timely surrender of the required allowances for the current compliance year, and must apply to the Ministry of Environment for approval with an acceptable justification for the need.⁴¹ According to the Presidential Decree, an acceptable justification is when the number of allocated allowances to a covered entity is not sufficient to meet the surrender obligations for the current compliance year.⁴² The maximum amount of allowances that can be borrowed is 10% of the quantity that needs to be surrendered during the current compliance year.⁴³ Although borrowing allowances requires formal approval from the Ministry of Environment, the low standard for approval indicates that the borrowing of allowances will usually be approved.

Linking to a system with unrestricted borrowing for the future commitment periods could impact the environmental integrity of the linked systems and undermine the penalty provisions for non-compliance. This is particularly true if the borrowing is done against future, undefined allocations.⁴⁴ Since Korea has both a long-term plan and a mid-term year plan concurrently, allocations during the future commitment periods are not known with absolute certainty far in advance (i.e. the long term plan may be adjusted during the mid-term plan or when reviewed). As a result of this uncertainty, Korea does not allow borrowing from future compliance periods. Thus, its borrowing

40. Emissions Trading Act, *supra* note 16, art. 28(2).

41. Emissions Trading Act, *supra* note 16, art. 28(2).

42. Enforcement Decree, *supra* note 26, art. 37(1).

43. *Id.* art. 37(2).

44. WRI Report, *supra* note 30, at 56.

provisions do not impact the linking in a negative way.

3. Stability Measures

The Emissions Trading Act provides the Ministry of Environment with the authority to take certain measures to maintain the stability of the emissions trading market. If certain conditions are met, the Ministry of Environment can do any of the following:

- Allocate additional allowances up to 25% of emission allowances in reserve;
- Change the minimum or maximum holding limits of allowances;
- Enlarge or reduce borrowing limits;
- Limit the banking of allowances; and
- Temporarily set minimum or maximum prices of emission allowances.⁴⁵

Once the market has returned to its stable state, the Ministry of Environment should terminate all market stabilization measures.⁴⁶

Stability measures can act to undermine the environmental integrity of the linked schemes depending on their designs.⁴⁷ For example, if one system has a price cap and the other system does not, the price cap is effective across both systems.⁴⁸ Although Korea's emissions trading scheme does not have a hard price cap, the ability to set the maximum prices of emissions allowances (albeit temporarily) will create uncertainty as to the environmental integrity of a link, since politically, the Korean Government may be pressured to use its price capping power and thus, impact any linked system. If the Korean Government initiates a temporary price cap, it could lead to a short-term capital inflow to Korea, as entities in Korea become net sellers.⁴⁹ The ability of the Korean government to allocate additional allowances from the allowance reserve can also impact any emissions trading scheme Korea is linked with in

45. Note, *supra* note 16, art. 24; Enforcement Decree, *supra* note 26, art. 31(5).

46. Note, *supra* note 16, art. 20.

47. WRI Report, *supra* note 30, at 53.

48. *Id.*

49. *Id.*

a similar fashion.⁵⁰ Agreement on a single set of cost-containment measures may be a necessary pre-condition for an unrestricted two-way link between Korea and another emissions trading scheme.⁵¹

F. Use of Domestic Korean Offsets

Offsets can be used for compliance purposes in Korea's emissions trading scheme. Although offsets cannot directly be submitted for compliance obligations, they can be exchanged for special emission allowances called "offset emission allowances."⁵² The Ministry of Environment is then to cancel, retire, or otherwise "discard" the original offsets.⁵³ These offset emission allowances can be traded among participants and submitted for compliance purposes up to 10% of a company or facility's surrender obligation.⁵⁴

However, for the first and second phases of the emissions trading scheme, up until 2020, external offsets (i.e. offsets generated outside of Korea) cannot be used.⁵⁵ As a result of the external offset ban, the cost of compliance and for reducing emissions can be expected to increase. Furthermore, as Korea is a host country to many CDM projects, up until the year 2020, these domestic offset projects might not be qualified for use in Korea's emissions trading scheme because they are registered under the CDM.

Offset systems do not necessarily impede linking on a technical basis, although, they are important considerations politically.⁵⁶ The most important consideration when linking to an offset mechanism is "additionality"—whether the offset projects that are generating credits reduced emissions as a result of the offset program activity when compared to what would have happened without such a program.⁵⁷ Specifically, additionality requires verifying

50. *Id.*

51. IETA Report, *supra* note 3, at 49.

52. Enforcement Decree, *supra* note 26, art. 39(1). The conversion rate is 1:1 ratio; Note, *supra* note 26, art. 39(2).

53. *Id.* art. 39(6).

54. *Id.* art. 39(4).

55. Sangim Han, *South Korea Restricts Carbon Offsets, Sets Rules for Giveaways*, Bloomberg (Nov. 13, 2012), <http://www.bloomberg.com/news/2012-11-13/south-korea-asks-for-carbon-cuts-at-home-before-allowing-offsets.html>.

56. WRI Report, *supra* note 30, at 62.

57. See Baker & McKenzie, *CDM Rule Book*, at 84, <http://cdmrulebook.org> (last visited Feb. 7, 2013).

what a project developer and offset creditor would have done without the offset program. If a project does not reduce emissions, then the environmental integrity of the emissions trading scheme allowing offset credits from that project is reduced. Similarly, the offset crediting rules of the more lenient emissions trading scheme will de facto establish the rules for additionality of both linked emissions trading schemes.⁵⁸ Therefore, it is desirable that emissions trading schemes have comparable environmental integrity standards for the qualified offsets. Although there are many facets to offset programs, the two most important for linking are (1) what projects are eligible in each system, and (2) to what extent can covered entities use offsets for compliance obligations in each system.⁵⁹

Unfortunately, Korea's offset market for its emissions trading scheme is not yet well defined. In addition, CDM credits will not be accepted for the first two compliance periods. This means that all of the domestic offsets used during these periods will be credited by local Korean standards for additionality. Although the Emissions Trading Act requires the Korean Government to use international standards for crediting, there may be certain types of projects which are eligible in Korea that are not eligible elsewhere. If Korea links to another emissions trading scheme without any changes, then the other country effectively adopt those types of projects indirectly.⁶⁰

G. Use of Offsets from Third Countries

Offsets generated outside of Korea will also be allowed to be used, although only after the year 2020. Overseas offsets cannot exceed 50 percent of the maximum usage limit of offsets.⁶¹ Overseas credits must also be converted into offset emission allowances.⁶² CDM and other UNFCCC-based offsets automatically meet the criteria for MRV under the Emissions Trading Act.⁶³ In addition, the Ministry of Environment can create standards and rules for approving the issuing of offset credits for overseas projects if those cred-

58. *Id.*

59. *Id.* at 63-64.

60. See IETA Report, *supra* note 3, at 42-48.

61. Enforcement Decree, *supra* note 26, art. 39(4).

62. Emissions Trading Act, *supra* note 16, art. 28, 30.

63. *Id.* art. 39(3).

its are intended for use in the Korean emissions trading scheme.⁶⁴

Offset credits generated in foreign countries have greater concerns than domestic offsets when one system allows those offsets when another does not. In that scenario, these offsets become effectively used in both systems by transferring demand from one system to the other.⁶⁵ In addition, large differences in the quantitative limits can become a problem. Companies in the stricter system will buy allowances from a more lenient system, whose companies would replace the lost allowances with the offsets.⁶⁶

A particular issue that may arise with the Korean emissions trading scheme is the use of bilateral offset credit mechanisms (“BOCM”). A BOCM is a credit mechanism designed and promoted by Japan in order to generate offset credits, which could be used in a possible future emissions trading scheme in Japan.⁶⁷ BOCMs could also be used by Korea to provide offset credits for the emissions trading scheme. A BOCM uses bilateral cooperation between two countries to reduce emissions in the host country and provide credits to either the host country or the funding country. The informal nature of a BOCM does not require an international agreement. Furthermore, the BOCM is managed by a joint implementation committee that creates the rules of implementation and other necessary guidelines. The key aspects of a BOCM are its decentralized structure and governance system, a broader coverage in terms of potential project types, and a more leniency in eligible project types or reduction methods.⁶⁸

Likewise, any country that links to an emissions trading scheme that utilizes BOCMs will be indirectly linked to those mechanisms. Even though BOCMs have an informal structure, a participating country would have more difficulty to cancel a BOCM as a precondition to link an emissions trading scheme. Therefore, should Korea pursue a BOCM as a mechanism to generate external offsets, it must take into consideration how the BOCM will impact direct linking of emission trading schemes.

64. *Id.* art. 40.

65. IETA Report, *supra* note 3, at 42-48. *See also* WRI Report, *supra* note 30, at 64.

66. Note, *supra* note 30, at 65.

67. Government of Japan, Outline of the Bilateral Offset Credit Mechanism (Aug. 2012), available at http://www.mmechanisms.org/document/20120824_BOCM_seminar_goj.pdf (last visited Feb. 8, 2013).

68. *Id.* at 10.

H. Other Subsidies and Revenue Recycling

According to the Emissions Trading Act, in order to prevent the loss of firms' competitiveness, the Korean Government may provide financial support, tax incentives, subsidies or other assistance for its projects to develop and install emission reducing equipments or technology.⁶⁹ Specifically, the Government may use revenues generated from allowance auctions, penalties and other fines.⁷⁰

Revenue recycling can impact the feasibility of linking emissions trading schemes. Although revenue recycling does not necessarily impact allowance prices, it may cause competing industrial sectors to perceive Korean companies as having an unfair subsidy.⁷¹ Nevertheless, the current version of Korea's emissions trading scheme does not envision more than a small percentage of allowances to be auctioned, and penalties should be seen as small or minimal. Therefore, the impact that the revenue recycling methodology under the Korean emissions trading scheme will have on linking will be minimal.

V. Case Studies of the Governance of Linking

A. Legal Methodology of Emissions Trading Schemes for Linking

Linking between emissions trading schemes is already occurring. Some links have been formally established, while others are currently in their negotiation phase. These links should serve as useful examples on how countries or regions are establishing the legal structure and the governance of links. This section will look at five case-examples of how linking is being established or could be established.

69. Emissions Trading Act, *supra* note 16, art. 35.

70. *Id.* art. 35(3).

71. WRI Report, *supra* note 30, at 69.

Table 1: Legal Framework of Linking

ETS A	ETS B	Type of Link	Method of Implementation	Formality	Legal Governance
European Union	Iceland, Liechtenstein, Norway	Direct Multilateral Link	Treaty; European Union Law	Formal	Largely Centralized for Phase 3
European Union	Australia	One Way Direct Unilateral leading to Direct Bilateral	Memorandum of Understanding; Domestic changes to Australia's Law; Bilateral Treaty	Informal changing to Formal	Possibly Centralized
California (United States)	Quebec (Canada)	Direct Reciprocal Unilateral Linking	Domestic changes to California and Quebec Law	Informal	Primarily Decentralized ⁷²
Regional Greenhouse Gas Initiative (United States)		Direct Reciprocal Unilateral Linking	Memorandum of Understanding; Model Legislation	Informal	Decentralized
American Clean Energy and Security Act (United States)		Direct Unilateral Linking	No Agreement Required	Informal	Largely Decentralized

72. California and Quebec's plan to hold joint auctions, however the manner of holding these joint auctions has yet to be determined. California Air Resources Board, Staff Report: Initial Statement of Reasons, *Proposed Amendments to the California Cap on Greenhouse Gas Emissions and Market-based Compliance Mechanisms to Allow for the Use of Compliance Instruments Issued by Linked Jurisdictions* (California Air Resources Board 2012).

1. European Union

Although the European Union's emissions trading scheme is a single scheme, in terms of how it was established and implemented, it contains design elements that provide useful illustrations of linking in practice. Conceptually, the European Union emissions trading scheme "links" together the emissions of European Union member states into one large regional trading regime. Some of the governance of the European Union emissions trading scheme is centralized to the European Commission, but many other aspects of implementing the scheme are delegated to the member states.⁷³ In addition, The European Union emissions trading scheme is directly linked to the emissions trading schemes of Iceland, Norway, and Liechtenstein through the incorporation of the EU Directive into the European Economic Area Agreement.⁷⁴

Under this view, the experience of the European Union with its scheme suggests that for a multilateral linking, more top-down governance is needed. During Phase 1 and Phase 2, member states were responsible for creating national allocation plans to determine the amount and method of allocation of allowances to covered entities within their respective jurisdictions.⁷⁵ As a result, many states over-allocated allowances in order to protect domestic industries.⁷⁶ Subsequently, when the European Union Directive was modified for Phase 3, the management of the scheme was further centralized at the EU level, such as the transition to a EU-wide cap on emissions rather than individual national cap as before.⁷⁷

2. Australia – European Union

In August, 2012, the European Union and Australia signed a Memorandum of Understanding for linking their respective emissions trading schemes

73. See IETA Report, *supra* note 3, at 16; See also EU Directive, *supra* note 39.

74. Note, *supra* note 39.

75. See *id.*

76. Simon Tilford, *How to Make the EU Emissions Trading System a Success* 20 (Christine Ockrent *et al.* eds., Ctr. for European Reform 2008). See also, Behr & Witte, *supra* note 4.

77. See Directive 2003/87/EC amended by Directive 2009/29/EC.

by 2018.⁷⁸ The Memorandum of Understanding requires the two countries to establish and enter into force a bilateral treaty to facilitate the linking by 2015.⁷⁹ This follows the European Union's policy of seeking international agreements for linking with other countries.⁸⁰ The treaty must address the measurement, verification, and reporting ("MRV") arrangements, types and quantities of offsets allowed, how vulnerable industrial sectors can be supported and market oversight. In the interim period, the EU and Australia will establish a partial link; specifically, Australia will amend its domestic law to unilaterally allow the use of EU allowances in Australia's emissions trading scheme.⁸¹

3. California (United States of America) – Quebec (Canada)

The Global Warming Solutions Act of 2006 ("AB 32") requires the State of California to reduce emissions to 1990 levels by 2020.⁸² AB 32 also requires the California Air Resources Board ("CARB") to work with other states and nations to facilitate cost-effective regional, national and international greenhouse gas reduction programs.⁸³ To meet the target under AB 32, the CARB established California's cap-and-trade program, covering 85 percent of state-

78. Press Release, European Comm'n, Linking of the European Union Emissions Trading Sys. and the Australian Emissions Trading Scheme (Aug. 28, 2012).

79. *Id.*

80. "Following entry into force of the Kyoto Protocol, the Commission should examine whether it could be possible to conclude agreements with countries listed in Annex B to the Kyoto Protocol which have yet to ratify the Protocol, to provide for the recognition of allowances between the Community scheme and mandatory greenhouse gas emissions trading schemes capping absolute emissions established within those countries." Directive 2004/101/EC, of the European Parliament and of the Council of 27 October 2004, amending Directive 2003/87/EC Establishing a Scheme for Greenhouse Gas Emission Allowance Trading within the Community, in Respect of the Kyoto Protocol's Project Mechanism, pmb. ¶. 18, 2004 O.J. (L338/18), available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2004:338:0018:0018:EN:PDF>.

81. Australia subsequently amended its domestic law to comply with the Memorandum of Understanding with the European Union. See *Implementing Links to Overseas Emissions Trading Schemes – Draft Legislation, 2012* (Commw. of Austl. Dep't of Climate Change and Energy Efficiency).

82. California Global Warming Solutions Act of 2006, Cal. Health & Safety § 38500 et seq. (2006).

83. *Id.*

wide greenhouse gas emissions, the regulation taking effect on January 1, 2012.⁸⁴

Since 2007, California has been working with other U.S. states and Canadian provinces (including Quebec) towards creating a regional cap-and-trade market. In 2012, CARB proposed and passed regulatory amendments to harmonize certain parts of California's cap-and-trade program with Quebec's. At the same time, Quebec also amended its own domestic cap-and-trade rules to similarly harmonize with California.⁸⁵

The harmonization of the two cap-and-trade programs will allow for the mutual recognition of the other's instruments of compliance. In addition, the amendments foresee auctions held jointly and the use of a unified tracking system for allowances and offsets. Structurally, California and Quebec's link between their schemes is an informal reciprocal unilateral linking. Although some form of political arrangement may be made in the future, the two governments do not have the capacity to enter into a legally binding international agreement.

4. Regional Greenhouse Gas Initiative (United States of America)

The Regional Greenhouse Gas Initiative ("RGGI") is a joint initiative among several US states to cap and then reduce CO₂ emissions from the power sector by 10 percent until the year of 2018.⁸⁶ Under the federal constitutional law, states are generally not allowed to enter into legally binding agreements with each other without the approval of Congress. Due to concerns that a proposed interstate compact capping greenhouse gas emissions would not be able to pass Congress, member states changed the legal architecture of the program. To join RGGI, member states sign the RGGI Memorandum of Understanding, which is a political agreement with no legally binding force. Thereafter, the participating states jointly developed a model statutory law for each state's domestic government to individually enact it

84. Final Regulation Order, Cal. Code Regs. tit. 17, § 95800 et seq. (2010).

85. See Pacific Carbon Trust, *Summary Note on the Amended Quebec Cap-and-Trade Regulation*, available at <http://www.pacificcarbontrust.com/assets/Uploads/Carbon-Industry-Intel/Summary-Notes-on-updated-Quebec-Cap-and-Trade-RegulationAug-9.pdf> (last visited Feb. 8, 2013).

86. See RGGI, *Program Design* (Feb. 08, 2013), <http://www.rggi.org/design>.

into law to be in conformity with the Memorandum of Understanding.⁸⁷

RGGI is another example of an informal reciprocal unilateral linking, with the added twist of more centralized joint planning of each state's initial rules. However, although it was initially a successful example of a creative legal solution to the inability to formally link, RGGI's nature as an informal link between states' domestic laws has led to an increase in political risk, particularly of severance. In 2011, the Governor of the State of New Jersey withdrew the state from RGGI.⁸⁸ In 2011 and 2012, the Legislature of the State of New Hampshire overwhelmingly approved legislation to withdraw from RGGI but failed to override the Governor's veto.⁸⁹ Instead, in 2012, the State of New Hampshire passed legislation limiting the state's participation in RGGI that also included an automatic severance provision that would become effective if two other New England states withdrew from RGGI.⁹⁰

5. American Clean Energy and Security Act of 2009 (United States of America)

Federal legislation to enact a national emissions trading scheme for the United States passed the House of Representatives in 2009. However, due to political constraints, the legislation was not able to pass the Senate and died when Congress' term finished at the end of 2009. Since then, no similar bill has been brought up for a vote in either chamber. Nevertheless, it is useful to examine the legislation as any future US legislation may have some of the same core fundamental features, particularly, regarding linking with other emissions trading schemes and rules for offsets, and the potential size of a national emissions trading scheme in the United States.

The American Clean Energy and Security Act of 2009 ("ACES") proposed

87. See RGGI, *Regional Greenhouse Gas Initiative Model Rule*, available at <http://www.rggi.org/docs/Model%20Rule%20Revised%2012.31.08.pdf> (last visited Feb. 8, 2013).

88. Reg'l Greenhouse Gas Initiative, RGGI, *New Jersey Withdrawal of Agreement to Memorandum of Understanding*, available at http://www.rggi.org/docs/Documents/NJ-Statement_112911.pdf (last visited Feb. 8, 2013). See also, Mireya Navarro, *Christie Pulls New Jersey from 10-State Climate Initiative*, N.Y. Times (May 26, 2011), http://www.nytimes.com/2011/05/27/nyregion/christie-pulls-nj-from-greenhouse-gas-coalition.html?_r=0.

89. H.B. 519-FN, 2011 Leg. (N.H. 2011); H.B. 1490-FN, 2011 Leg. (N.H. 2012).

90. H.B. 1490-FN, 2011 Leg. (N.H. 2012).

a cap-and-trade system for the entire United States covering approximately 85% of U.S. greenhouse gas emissions.⁹¹ Each year, the number of allowances issued would be lowered, resulting in emission reductions of 83% below 2005 levels by 2050.⁹² Between 2012 and 2025, only 18% of allowances would be auctioned, but from 2026 to 2050 the percentage would be gradually increase.⁹³

ACES allows importation and conversion of foreign emission allowances under certain conditions. The institutional body that would make the determination to link is the Environmental Protection Agency ("EPA"), not Congress.⁹⁴ The EPA would have the authority to designate other countries' emissions trading schemes as qualifying programs for importing their allowances into the United States.⁹⁵ In order to qualify, the program must be at least as stringent as ACES and impose a mandatory absolute limit on greenhouse gas emission.⁹⁶ Once a program qualifies, the covered entities may submit foreign emission allowances for compliance purposes and the EPA is required to disqualify such allowances from any further use.⁹⁷ In order to effectuate the cancellation of submitted foreign allowances, the EPA can use any means appropriate, including entering into an agreement with the other country or technical cooperation.⁹⁸ Finally, the EPA can limit the amount or percentage of foreign allowances that covered entities may use in order to meet their compliance obligations.

ACES envisioned the EPA to pursue an informal and unilateral, decentralized links without any input from Congress. In fact, the EPA may allow a unilateral importation even if there is a lack of consent from the partner country. In addition, through the provisions of ACES, Congressional intent could be inferred that Congress does not want to amend the law in order to

91. See American Clean Energy and Security Act of 2009, H.R. 2454, 111th Cong. (2009) [hereinafter "ACES"].

92. *Id.*

93. John Larsen, *A Closer Look at the American Clean Energy and Security Act*, World Resources Institute (July 2, 2009), <http://www.wri.org/stories/2009/07/closer-look-american-clean-energy-and-security-act>.

94. ACES, *supra* note 91, § 728.

95. *Id.* § 728(a).

96. *Id.* § 728(a)(1),(a)(2).

97. ACES, *supra* note 91, § 728(c)(2).

98. *Id.*

facilitate linking to another scheme. Legally, the EPA would unlikely pursue formal agreements with partner countries because any such formal agreement would require ratification by the U.S. Senate. Instead, the EPA could consider inter-government agreements, such as memorandums-of-understanding or technical agreements for cooperation.

B. What Linking with Korea's Emissions Trading Scheme May Look Like

Korea's Emissions Trading Act specifically foresees linking to foreign emissions trading schemes. To that effect, the Korean Government has already started informal discussions with other countries on potentially linking its emissions trading scheme.⁹⁹ The technical harmonization of design elements, the form of the link and the manner of governance will all be important aspects of any link Korea enters into. At the same time, Korea passed the emissions trading law after carefully including considerations from affected industries as to the design elements of Korea's emissions trading scheme.

The form of the link will be very important. As more links are created in the future between schemes and/or credit markets, the likelihood of indirect effects also increases. As a result, countries that have a formal link will have an incentive to create a political barrier for any partner country to establish informal links elsewhere in order to minimize unwanted indirect effects. In other words, formal linking not only will restrict a country's control over its own scheme and the ability to modify the design in the future, but also will restrict its ability to link to a third-party scheme later.

Similarly, the method of governance of a link will also become more important as more links between schemes are created. As noted above, the history of the European Union's emissions trading scheme shows that perhaps, having a centralized governance of linking may be more efficient and would provide greater environmental integrity than decentralized governance. On the other hand, a centralized governance, particularly under a bilateral treaty arrangement, will move discussions on linking from the national level to the international level and could actually impede other bilateral linking. Partner

99. Press Release, Tim Groser, Minister Welcomes [S.] Kor. ETS and Linking Study, N.Z. Gov. (May 4, 2012), <http://www.scoop.co.nz/stories/PA1205/S00093/minister-welcomes-sth-korea-ets-and-linking-study.htm>.

countries will likely want a new partner country to enter into the existing governance framework rather than to see one partner country unilaterally (formally or informally) link to a third-party scheme.

For Korea, linking with different emissions trading schemes will promote certain types of link while precluding other types depending upon the partner system. Based upon the categories of important characteristics of the linking previously described—type of link, degree of formality and the method of governance—it can then be assessed what types would be optimal, required or discouraged. Such an assessment may look like the following table:

Table 2: Hypothetical Forms of Emissions Trading Scheme Links

ETS A	ETS B	Type of Link	Formality	Governance
Korea	European Union	Formal	Direct Bilateral	Highly Centralized
Korea	Australia	Informal/Formal	Direct Bilateral/Unilateral Reciprocity	Possibly Some Centralization
Korea	United States (ACES)	Informal	Direct Unilateral Reciprocity ¹⁰⁰	Largely Decentralized
Korea	California	Informal	Direct Unilateral Reciprocity	Highly Decentralized
Korea	RGGI	Informal	Direct Unilateral Reciprocity	Highly Decentralized

1. Linking to the European Union or Australia

As explained above, the European Union will probably not engage in linking with another emissions trading scheme if that country does not have an internationally binding quantified emissions limitation. This position is likely to continue through Kyoto II until the year 2020, but the international legal framework thereafter could be more accommodating for linking. So far, the

100. Even in the absence of any reciprocal linking or even informal cooperation agreements, the EPA would legally have the power to unilaterally allow the importation of Korean allowances. In this case, the link would be a direct one-way unilateral link.

European Union is working with Australia to establish a formal bilateral agreement for linking the two emissions trading schemes. If the European Union and Australia establish a formal agreement, it could become a “prototype” agreement that would be the basis for links with additional countries. Similarly, the European Union may prefer a formal bilateral agreement with Korea as well.

Due to the size-difference between the European Union’s emissions trading scheme and Korea’s emissions trading scheme (and thus in the negotiating power), it is unlikely that Korea would be able to carve out a large number of concessions on the design elements. Therefore, Korea’s focus should be on the form of governance. A bilateral agreement that provides a highly centralized governance system could protect Korea’s interests more than a decentralized model. For example, the treaty could require any design changes to the linked emissions trading schemes to be made through a treaty body, rather than at the national level, or give Korea veto power, or the power to withdraw. These mechanisms could ensure Korea would not be subject to unilateral changes by the European Union without its consent.

For Australia, similar issues regarding legally binding obligations under Kyoto II may impede a full link between Korea and Australia until after 2020. Furthermore, if the link between Australia and the European Union is formally established, particularly through a legally binding treaty, then a link between Korea and Australia will necessarily be mentioned by the European Union-Australia linking agreement. Notwithstanding this, a link between Korea and Australia, theoretically, could be more flexibly established because the sizes of the two schemes are more comparable.

2. Linking to the United States (ACES)

Compared to the European Union or Australia, linking with the United States would require a different approach. As discussed above, Waxman-Markey explicitly envisions a unilateral linking with other emissions trading schemes in lieu of formal international agreements. Therefore, in this situation, Korea could seek after a unilateral reciprocal linking. Issues and design elements of the link established could then be resolved through informal agreements between the appropriate Korean governmental body and the EPA. Thus, the governance would be largely decentralized. Korea would also retain the ability to unilaterally withdraw from an informal agreement with the

EPA, however, the EPA could still unilaterally allow the importation of Korean allowances without any consent.

3. Linking to California/RGGI

Linking to California's emissions trading scheme or RGGI would entail the similar considerations. Since California and the member states of RGGI are sub-national legal entities, they generally cannot enter into internationally legally binding agreements.¹⁰¹ Therefore, links with these two schemes must be informal. Nevertheless, direct unilateral reciprocal linking is possible. While some aspects of management of the schemes could be done jointly, such as auctions, most aspects would continue to be at an individual government-level. In addition, each partner would have complete discretion to withdraw from the link in any manner. This could lead to greater political risk, particularly, with linking to an entity like RGGI, where one state has already withdrawn and another has changed the conditions of its participation.

VI. The Future of International Governance of Linking – Fracturing or Converging?

Issues regarding linking of emissions trading schemes will become more prevalent in the future as the emissions trading schemes proliferate and the international legal regime continues to change. During the Kyoto Protocol, Annex I countries had a quantified emissions reduction or limitation objectives which were legally binding; non-Annex I countries had no such obligations. At the Durban Conference in December of 2012, the Kyoto Protocol was extended into a second commitment period which is from 2013 to 2020, but three Annex I countries (Canada, Russia, and Japan) declined to take on the quantified emission reduction commitments for the second period.¹⁰² If an Annex I country were to link its emissions trading scheme to one from

101. The U.S. Constitution prohibits states from entering into treaties with foreign powers without the consent of Congress. U.S. Const. art. I, § 10, cl. 1. *See also* Mehling, *supra* note 13, at 49-50 (explaining how it may be constitutional for states to enter into agreements with foreign powers without Congressional consent).

102. Kyoto II, *supra* note 17.

a non-Annex I country, this could lead to the transfer of the Annex I's legal obligation to reduce emissions to the non-Annex I country. As such, if the European Union links to a developing country's emissions trading scheme, this could cause the European Union to breach its legally binding obligations under the Kyoto Protocol/Kyoto II.¹⁰³ Therefore, this issue of linking between countries with binding obligations and those without such obligations will continue to persist until 2020.

As more countries, both developed and developing, establish emissions trading schemes to reduce greenhouse gas emissions, issues regarding linking will domestic schemes are the result of a complex interplay between domestic constituencies and concerns. Any linking will have an impact on covered industries or other constituencies and their views may need to be taken into account again.¹⁰⁴ As the group of linked schemes becomes larger, each subsequent link will necessarily involve more constituents.

The complexity may increase if countries also begin to use bilateral/multilateral offset mechanisms. Different countries may have different views on which type of offset projects are acceptable, particularly, in terms of additionality. Modifying a scheme to ban a certain type of project in order to facilitate linking may be more difficult if that offset type is generated through a BOCM since it will directly impact a joint program with the third-party host country of the offsets. Also, if the BOCM is established through a formal agreement, the more difficult it would be to sever that link.

Another option for linking to credit mechanisms is to link to UNFCCC-based credit mechanisms. Currently, the primary UNFCCC-based credit mechanism is the CDM. The European Union is currently linked to the CDM and Korea will most likely link its emissions trading scheme to CDM after the year 2020, meaning, these two schemes will become indirectly linked. Nevertheless, it is important to note that countries are free to ban offsets generated from certain types of CDM projects from use. Furthermore, a

103. See Wolfgang Sterk *et al.*, *Ready to Link Up? Implications of Design Differences for Linking Domestic Emissions Trading Schemes* 63-65 (JET-SET, Working Paper No. I/06, 2006), available at http://wupperinst.org/uploads/tx_wupperinst/ready-to-link-up.pdf.

104. For example, as a result of EU-Australia negotiations for linking their emissions trading schemes, European manufacturers have warned of lower growth. See John McGarrity, *EU Industry to Carry Burden from Australia ETS Link: Lobby*, Thomson Reuter Point Carbon (Dec. 27, 2012), <http://www.pointcarbon.com/news/1.2116165>. See also Behr & Witte, *supra* note 4.

new agreement under the UNFCCC may include additional “New Market Mechanisms.”¹⁰⁵ These new types of market mechanisms also may or may not be linked to, which further complicates the links to the credit markets.

One potential result would be that the different linked systems become locked into that link, without the ability to further link to other linked systems. Suppose country A and country B have linked emissions trading schemes. Country A wants to link to country C's emissions trading scheme as well; however, country B knows that if such a link were to occur, it would impact country B's scheme by means of indirect linking and propagation. Therefore, country B would have an incentive to be involved in negotiations for the linking between A and C. Ultimately, a possible result could be to have two or more groups of closed links: one group of linked systems would have similar design elements and/or common credit market links while a second group of linked systems would have very different design elements. The two systems would be mutually incompatible or two difficult to merge together due to unique design elements that have become integral to each system.

The alternative long-term result could be that the global market largely harmonizes around a common set of emission trading standards.¹⁰⁶ A supra-national organization, perhaps under the UNFCCC umbrella, could be established to oversee the standards and procedures for the recognition of allowances or generally regulate the linking between emissions trading schemes.¹⁰⁷ Another possibility could occur if one emissions trading scheme dominates the other schemes in size (and thus, has negotiating leverage), creating a situation where a country could “opt-in” to a single group of linked emissions trading schemes via full harmonization.

The post-2020 legal landscape for emissions trading and credit mechanism is not yet clear. Nonetheless, there is an opportunity for countries to establish normative practices for linking during the near-term and mid-term. Not only will technical details of linking be important, but the form of governance will become a critical issue—how much control should become centralized within

105. See Wolfgang Sterk, Wuppertal Inst. for Climate, Env't, and Energy, *Current Proposals and Positions on New Market Mechanisms* (May 2012), available at http://www.jiko-bmu.de/files/basisinformationen/application/pdf/pp_nmbm_submissions.pdf (Ger.).

106. Jaffe *et al.*, *supra* note 5, at 805-06.

107. WRI Report, *supra* note 30, at 79.

some supranational entity or otherwise, be fixed in an agreement. The greater the regulatory control ceded to an international entity to manage the link between systems, the less flexibility and authority the partner countries will have to enter into additional linking agreements.

VII. Conclusion

Korean policy makers must take careful considerations of all aspects of linking to another country's emissions trading scheme. Importantly, the first link that Korea establishes, with the characteristics and design elements that the link has, will have a significant impact on the expansion to create additional links in the future. With which country the initial linking should be conducted will set the foundation for the methodology and governance of additional linkages. Therefore, not only should Korea ensure that a link provides economic and efficiency gains while maintaining environmental integrity, but Korea should choose an initial "partner" country that best fits Korea's circumstances.

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