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Greenhouse Gas Emissions Trading within the European Union- An Overview of the Proposed European Directive

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ESSAY

GREENHOUSE GAS EMISSIONS TRADING WITHIN THE EUROPEAN UNION: AN OVERVIEW OF THE PROPOSED EUROPEAN DIRECTIVE*

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INTRODUCTION

On October 23, 2001, the European Union (“EU”) proposed significant initiatives reinforcing its leadership role with respect to the Kyoto Protocol¹ (“Protocol”) to the 1997 United Nations Framework Convention on Climate Change (“U.N.F.C.C.C.”).² In addition to calling for the development of several environmental

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1. *Kyoto Protocol to the United Nations Framework Convention on Climate Change*, Dec. 10, 1997, Conference of the Parties, 3d Sess., Agenda Item 5, U.N. Doc. FCCC/CP/1997/L.7/Add.1, reprinted in 37 I.L.M. 22 (1998) (eighty-four signatories as of Mar. 6, 2002, although not yet in force) [hereinafter *Kyoto Protocol*].

2. *United Nations Framework Convention on Climate Change*, June 13, 1992, 31 I.L.M. 849 [hereinafter *U.N.F.C.C.C.*].

measures, the European Commission proposed ratification of the Protocol by the EU and each of the fifteen EU Member States (“Member States”) before the World Summit on Sustainable Development in Johannesburg in September 2002.³ In what is expected to be an “important cornerstone” in the EU’s effort to achieve cost-effective and efficient compliance with the Protocol, the European Commission published a proposed directive establishing the framework of an EU-wide greenhouse gas emissions trading program (“Proposed Directive”).⁴

This essay provides an overview of the fundamentals of greenhouse gas emissions trading and the principle aspects of the Proposed Directive.

I. PRELIMINARY REMARKS

A. *The Protocol*

Seeking to reduce global greenhouse gas emissions, 186 parties, including the EU, adopted the U.N.F.C.C.C.⁵ As an addendum to the convention, the Protocol was adopted in December 1997 to set

3. See Proposal for a Council Decision Concerning the Conclusion, on Behalf of the European Community, of the Kyoto Protocol to the United Nations Framework Convention on Climate Change and the Joint Fulfillment of Commitments Thereunder, COM(01)579 final at art. 5, ¶ 27 [hereinafter Council Decision] (citing the explanatory memorandum accompanying the Council Decision).

4. See Proposal for a Directive of the European Parliament and of the Council Establishing a Framework for Greenhouse Gas Emissions Trading within the European Community and Amending Council Directive 96/61/ED, COM(01)581 final at Annex II [hereinafter Proposed Directive]. When this essay cites to a specific article (art.), *supra* note 4, it refers to the text of the Proposed Directive. Citations to specific paragraphs (¶) refer to the explanatory memorandum accompanying the Proposed Directive.

5. See Council Decision, *supra* note 3, ¶ 1; see also U.N.F.C.C.C., *supra* note 2.

legally binding emissions targets.⁶ Already signed by eighty-four parties, including the EU, the Protocol will become effective upon ratification by at least fifty-five parties to the U.N.F.C.C.C., including a sufficient number of Annex I parties that collectively emit at least 55% of the Annex I carbon dioxide (“CO₂”) emissions.⁷

Under the terms of the Protocol, each Member State agreed to a reduction in the emissions of six specific greenhouse gases.⁸ The Member States are part of a “burden sharing agreement,”⁹ whereby the Member States are committed to an 8% greenhouse gas emissions reduction by 2008–2012 from 1990 levels.¹⁰ Over the long term, the EU is looking to reduce its emissions from 1990 levels by 70%.¹¹

International greenhouse gas emissions trading constitutes one of the most important instruments for cost-effective implementation of the Protocol.¹² At the heart of the negotiations held during the Conference of the Parties to the Protocol (“COP”) in October and

6. See Council Decision, *supra* note 3, ¶ 4. Subsequent meetings of the Parties to the Convention helped define the implementation of the Protocol. See, e.g., PEW CTR. OF GLOBAL CLIMATE CHANGE, SUMMARY OF THE MARRAKECH ACCORDS ON CLIMATE CHANGE (2001) (discussing key decisions in Marrakech), at http://www.pewclimate.org/cop7/update_110901.cfm (last visited Mar. 18, 2002).

7. See Kyoto Protocol, *supra* note 1, at art. 25.1. “Annex I parties” are those parties included in Annex I to the United Nations Framework Convention on Climate Change, adopted in New York on May 9, 1992. U.N.F.C.C.C., *supra* note 2, at Annex I.

8. Kyoto Protocol, *supra* note 1, at art. 3.1. The six greenhouse gases are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF₆). *Id.* at Annex A.

9. See Council Decision, *supra* note 3, ¶ 8.

10. *Id.*; see Proposed Directive, *supra* note 4, ¶ 4. Recent data suggests that the EU will meet this commitment as levels of greenhouse gas emissions were 4% below 1990 levels. See Council Decision, *supra* note 3, ¶ 2.

11. Proposed Directive, *supra* note 4, ¶ 3.

12. *Id.* ¶ 5; Green Paper on Greenhouse Gas Emissions Trading within the European Union, COM(00)87 final at 6 [hereinafter Green Paper].

November 2001 in Marrakech, was the development of such a program governing cross-border emissions trading among Annex I countries.¹³

B. *Overview: Greenhouse Gas Emissions Trading*

Greenhouse gas emissions trading is an innovative system gaining attention throughout the global community.¹⁴ Under this system, a central organization assigns “permits” to installations emitting greenhouse gases.¹⁵ On an annual basis,¹⁶ these permit holders receive what are often called “allowances,”¹⁷ “quotas” or “caps,”¹⁸ permitting such permit holders to emit a certain level of greenhouse gases.¹⁹ If such levels are exceeded, the installations are subject to penalties.²⁰

When a permit holder, during an allowance period, emits less greenhouse gas than allowed under its allowances, the permit holder benefits from the ability to sell its unused portion.²¹ Such allowances may be retained, banked for application towards future emissions or may be sold to another party.²² A party that has insufficient allowances to cover its emissions must buy allowances from a party with allowances to sell.²³ In effect, an installation that pollutes less than allowed under its allowances is financially compensated, and an installation whose emissions exceed its allowances is financially penalized.²⁴ Such penalties include fines and an obligation to purchase, during the following applicable allowance period,

13. See PEW CTR. OF GLOBAL CLIMATE CHANGE, *supra* note 6.

14. See discussion *infra* Part IV.

15. See Green Paper, *supra* note 12, at 8; Proposed Directive, *supra* note 4, ¶ 5.

16. See Proposed Directive, *supra* note 4, ¶ 11.

17. *Id.* ¶ 1.2.

18. See Green Paper, *supra* note 12.

19. See Proposed Directive, *supra* note 4, ¶ 3.

20. *Id.* ¶ 16.

21. *Id.* ¶ 2; see also Green Paper, *supra* note 12, at 8.

22. Proposed Directive, *supra* note 4, ¶ 14.

23. *Id.* ¶ 12.

24. See *id.* ¶ 16.

sufficient allowances to cover excess emissions from the previous period.²⁵

The principal advantage of such a greenhouse gas emissions trading system is that it provides for a stabilization in global pollution levels and then for a gradual reduction in the total pollution level.²⁶ This is achieved as central authorities gradually reduce the total number of allowances available per period.²⁷ In the United States, such an approach led to a reduction of over 50% in 1999 of sulfur dioxide (“SO₂”) emissions from 1980 levels.²⁸ Such emissions trading systems also provide individual installations with the flexibility to decide what emissions levels to achieve and the incentive to develop more efficient and less-polluting methods of production.²⁹ As a result, tradable emissions programs are designed to reduce pollution without impeding economic development.³⁰

C. Emissions Trading in the U.S.: Brief Introduction

The United States has had the most extensive experience with emissions trading systems.³¹ For example, the United States Congress created the Acid Rain Program under Title IV of the 1990 Clean Air Act Amendments,³² which requires reductions in SO₂ emissions from electric utilities and permits the market-based trading

25. *Id.*

26. *See, e.g.,* David M. Driesen, *Free Lunch or Cheap Fix?: The Emissions Trading Idea and the Climate Change Convention*, 26 B.C. ENVTL. AFF. L. REV. 1, 13 (1998).

27. *See* Proposed Directive, *supra* note 4, ¶ 24.

28. EPA, PROGRESS REPORT ON THE EPA ACID RAIN PROGRAM, at 5–6 (1999), *available at* http://www.dep.state.pa.us/dep/deputate/airwaste/aq/acidrain/epa_progress_report.pdf (last visited Mar. 18, 2002). “[T]he program will result in a ten million ton reduction in SO₂ from 1980 levels in 2010.” *Id.*

29. *See* Proposed Directive, *supra* note 4, ¶ 2.

30. *Id.*

31. *See* Driesen, *supra* note 26, at 2 (suggesting that the United States’ emissions trading system is a major component of its climate change policy).

32. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, 104 Stat. 2399 (1990).

of SO₂ emissions allowances.³³ By 2010, the program seeks to reduce SO₂ emissions by approximately one-half of those levels reached in 1980.³⁴ Phase I of the program began in 1995 and applies to the largest, most-polluting, electric utilities.³⁵ Phase II of the program began in 2000 and tightens emissions caps and expands the number and type of installations covered under the program.³⁶

Under the program, the Environmental Protection Agency (“EPA”) has established various monitoring, reporting and verification requirements applicable to all participating installations.³⁷ In addition, the EPA grants allowances to installations based on prior fuel use, which are then monitored via an automated Allowance Tracking System.³⁸ This system allows any installation, individual, interest group or other entity³⁹ to trade or bank allowances for future use and also purchase additional allowances at an annual auction held by the Chicago Board of Trade.⁴⁰

An installation whose emissions exceed its allowances is subject to a fine of \$2,000 per excess ton emitted and must forfeit the corresponding number of exceeded allowances the following year.⁴¹

33. See EPA, *supra* note 28, at 3. Nitrogen oxides (NO_x) emissions are not covered under the cap and trade program, instead these emissions are set for each installation. *Id.*

34. See *id.* at 5–6.

35. See 42 U.S.C. § 7651c (2001) (discussing the Phase I SO₂ requirements).

36. See *id.* §§ 7651d(c)–(f), (h), (j) (discussing the Phase II SO₂ requirements).

37. See generally EPA, *supra* note 28.

38. See 42 U.S.C. §§ 7651b(a), (d) (discussing the SO₂ allowance program for existing and new units).

39. See *id.* § 7651o(d)(2).

40. See Acid Rain Program Allowance Auction Fact Sheet, at <http://www.epa.gov/airmarkt/auctions/factsheet.html>. The Chicago Board of Trade serves as a forum for exchange member buyers and sellers of commodities. The traders are individual members and member firms who seek to trade either agricultural commodities or financial instruments for their customers. See generally The Chicago Board of Trade, at <http://www.cbot.com> (last visited Apr. 1, 2002) (for links to news articles, quotes and general information on this exchange).

41. 42 U.S.C. §§ 7651(a), (b).

Due in large part to a strong monitoring and enforcement program, the emissions trading program "is facilitating 100% compliance by affected sources."⁴²

The SO₂ emissions trading program has resulted in emissions that have been significantly reduced beyond target levels,⁴³ significantly improved air quality and reduced sulfur deposition in acid rain.⁴⁴

D. Multilateral Emissions Trading

Article 17 of the Protocol contemplates the possibility of participation in cross-border emissions trading.⁴⁵ However, the Protocol and COPs do not provide a framework for the establishment of such a program. Additionally, emissions trading is still in its infancy and limited to a few domestic programs, and no comprehensive precedent exists for transnational emissions trading. Building an efficient multilateral emissions trading system is challenging because it requires a degree of reconciliation among divergent domestic programs.⁴⁶ One of the most important aspects of a successful multilateral system is the harmonization of domestic trading programs, all of which need to abide by a minimum set of common features.⁴⁷

From a theoretical point of view, an international trading system may take the form of either a series of individual agreements among countries authorizing the mutual recognition of each domestic trading program or, following a more integrated approach, an "umbrella" agreement that would "harmonize the various domestic arrangements into a unified international trading system with an international governance structure."⁴⁸

42. See EPA, *supra* note 28, at 20.

43. *Id.* at 5.

44. *Id.* at 6–10.

45. See Kyoto Protocol, *supra* note 1, at art. 17.

46. See UNITED NATIONS COMMITTEE ON TRADE AND DEVELOPMENT, GREENHOUSE GAS MARKET PERSPECTIVES: TRADE AND INVESTMENT IMPLICATIONS OF THE CLIMATE CHANGE REGIME, RECENT RESEARCH ON INSTITUTIONAL AND ECONOMIC ASPECTS OF CARBON TRADING 9 (2001) [hereinafter MARKET PERSPECTIVES].

47. *Id.* at 9–11.

48. *Id.* at 9.

II. INTRODUCTION TO THE PROPOSED DIRECTIVE

It is important to note that the Proposed Directive was proposed by the European Parliament and the Council pursuant to Article 251 of the European Community Treaty.⁴⁹ This Article sets forth the co-decision process whereby the European Parliament and the Council jointly adopt measures through a procedure including, for example, review and amendment procedures and the establishment of conciliation committees.⁵⁰ EU officials expect that the approval process of a final greenhouse gas emissions trading directive will take approximately two years.⁵¹

Once adopted, a directive binds each Member State to which it is addressed, but it leaves to the national authorities the choice of form and method.⁵² A directive is not directly applicable within a domestic legal order and only provides objectives and goals that each Member State must implement through laws and/or regulations at a national level.⁵³ Therefore, while a directive is generally considered to be a flexible instrument, as it leaves room for interpretation and adaptation by each Member State, it can create uncertainty as to the speed and the extent of its implementation within each Member State.

A. *Goal of the Proposed Directive*

Beginning on January 1, 2008, the Proposed Directive seeks to create the first “umbrella” international agreement, as referred to above, and establishes a three-year trial period starting in 2005.⁵⁴ In

49. Treaty Establishing the European Community, Feb. 7, 1992, art. 251, O.J. C 224/1 (1992), [1992] 1 C.M.L.R. 573, 689 [hereinafter EC Treaty], incorporating changes made by Treaty on European Union, Feb. 7, 1992, O.J. C 224/1 (1992), [1992] 1 C.M.L.R. 719; see Proposed Directive, *supra* note 4, ¶ 19.

50. See COUNCIL OF THE EUROPEAN UNION, CO-DECISION GUIDE, available at <http://ue.eu.int/codec/en/EN.pdf> (last visited Mar. 21, 2002).

51. *EU Braces for Battle on Greenhouse Gas Trading Plan*, AIR DAILY (D.C.), Jan. 8, 2002, at 5.

52. See EC Treaty, *supra* note 49.

53. *Id.*

54. See MARKET PERSPECTIVES, *supra* note 46.

1999, the European Commission stated that CO₂ emissions were increasing and required a “sustained policy response”⁵⁵ so that the EU would be in a position to comply with its Protocol commitments.⁵⁶ Therefore, in order to efficiently and economically reach these commitments, the European Commission produced the Proposed Directive outlining the initial framework of an EU system of greenhouse gas emissions trading.⁵⁷ The EU estimates that such an EU-wide emissions trading program, in contrast to individual Member State trading schemes that do not provide for cross-border trading, will help to create an approximate annual cost savings of €1.7 billion (approximately \$1.5 billion).⁵⁸

Under the terms of the Protocol, each party must individually implement a greenhouse gas emissions trading program.⁵⁹ The Proposed Directive calls for the eventual integration of these individual systems into an EU-wide system to allow “learning-by-doing”⁶⁰ in preparation for the international emissions trading program under the Protocol beginning in 2008.⁶¹ To facilitate this harmonization, the Proposed Directive provides for various means for harmonizing the various national trading programs. For example, a unified allowance allocation method will be established within the EU to protect the internal market and help to provide equal opportunities for installations from any Member State.⁶²

B. Covered Gases and Installations

While the Proposed Directive takes into consideration all gases contributing to the greenhouse effect, the proposed trading program will initially only relate to allowances for CO₂ emissions.⁶³ Such emissions are responsible for approximately 80% of greenhouse gas

55. See Green Paper, *supra* note 12.

56. *Id.*

57. See Proposed Directive, *supra* note 4, ¶ 1.

58. See Green Paper, *supra* note 12.

59. See Proposed Directive, *supra* note 4, ¶ 1.1.

60. See Green Paper, *supra* note 12, ¶ 4.3.

61: *Id.*

62. *Id.* ¶ 5.1.

63. See Proposed Directive, *supra* note 4, ¶ 10.

emissions in the EU and are relatively easy to control and accurately monitor.⁶⁴

Only installations engaging in activities that are listed in Annex I are covered by the Proposed Directive.⁶⁵ Between 4,000 and 5,000 installations throughout Europe would be included in these categories, and these installations are expected to be responsible for approximately 46% of EU CO₂ emissions in 2010.⁶⁶

The commentary accompanying the Proposed Directive notes that the chemical and waste incineration sectors are not currently covered by the Proposed Directive, but it is expected that such coverage will expand to include these and other sectors when monitoring, reporting and verification issues are resolved.⁶⁷ By limiting the number of greenhouse gases and installations addressed during the initial stages of the EU-wide emissions trading program, the Proposed Directive adopts a pragmatic approach, following a learning-by-doing methodology and seeking not to unnecessarily burden Member States who have limited experience with emissions trading programs.

III. PRESENTATION OF THE PROPOSED DIRECTIVE

A. *Distinction Between Permits and Allowances*

1. Permits

Each installation covered by the Proposed Directive must obtain a permit. A permit is a written authorization delivered by the competent authority⁶⁸ allowing the emission of greenhouse gases and obligating the holder to comply with certain monitoring, reporting and verification requirements.⁶⁹ Permits must detail certain of these

64. *Id.*; see Green Paper, *supra* note 12.

65. See Proposed Directive, *supra* note 4, ¶ 4. These installations include, for example, petroleum refineries, coke ovens, metal ore roasting or sintering installations, glass and ceramic manufacturing installations and certain pulp and paper facilities. *Id.*

66. *Id.* ¶ 11.

67. *Id.* at art. 26.

68. See *id.* at art. 6; see also *id.* ¶ 12.

69. *Id.* at art. 6.

requirements and require the installation to provide, annually, sufficient allowances to cover its emissions from the previous period or face sanctions.⁷⁰ These permits, unlike allowances, may not be traded.⁷¹

EU Member States must guarantee that as of January 1, 2005, no covered installation will emit greenhouse gases without a permit.⁷² The competent authority charged with issuing permits must ensure that the capacity of the installation will respect the monitoring and reporting standards set forth in the Proposed Directive.⁷³

2. Allowances

An emissions allowance is the authorization to emit the equivalent of one ton of CO₂.⁷⁴ This allowance may be traded in national and EU-wide trading programs.⁷⁵ Allowances will exist only in electronic form enabling any natural or legal person to hold and trade allowances as long as a required account has been established with the national registries.⁷⁶

3. Allocation of Allowances

Each Member State must develop a national plan indicating the total number of allowances that it wishes to distribute and how it proposes to distribute them.⁷⁷ Each national plan must be based on objective and transparent criteria, some of which are set forth in Annex III of the Proposed Directive.⁷⁸ In addition, each Member State must publish and submit its proposed plan to the European Commission who may accept or reject the plan based on criteria set forth in the Proposed Directive.⁷⁹

70. *Id.* at art. 6.

71. *See* Proposed Directive, *supra* note 4, ¶ 1.2.

72. *Id.* at art. 4.

73. *Id.* at art. 16; *see also id.* at art. 14.

74. *See id.* ¶ 1.2.

75. *See id.* ¶ 3; *see also id.* ¶ 1.2.

76. *See id.* ¶ 15.

77. Proposed Directive, *supra* note 4, at art. 9.

78. *Id.*

79. *Id.* at art. 9.

Beginning January 1, 2005, Member States, for a period of three years, shall issue allowances without charge⁸⁰ and are responsible for deciding on the total number of allowances to be allocated and the number of allowances to be granted to each installation.⁸¹ For the five-year period beginning January 1, 2008, the European Commission will establish a method to harmonize the issuance of allowances.⁸² Member States will reserve certain authority as to such issuances.⁸³

During each year in the initial three-year period and for each subsequent five-year period, the competent authority shall issue a proportion of the total quantity of allowances to be issued for that period.⁸⁴

4. Duration and Banking of Allowances

Allowances are valid for a limited period. The first allowances issued under the Proposed Directive will be for a period of three years beginning January 1, 2005.⁸⁵ Beginning January 1, 2008, allowances will be issued for five-year periods.⁸⁶ Allowance holders may bank unused allowances during the initial three-year period or within each subsequent five-year period.⁸⁷

B. Allowance Usage

1. Cancellation of Allowances

Member States must provide for a voluntary cancellation of allowances at the request of their holder.⁸⁸ The Proposed Directive also provides for the possibility of other parties, such as non-governmental organizations, to purchase allowances and then cancel

80. *See id.* at art 10.

81. *Id.* at art. 11.

82. *Id.* at art. 10.

83. Proposed Directive, *supra* note 4, at arts. 11, 12; *see* discussion *infra* Part III.B.

84. *See* Proposed Directive, *supra* note 4, at art. 11.

85. *Id.* at art. 11.

86. *See id.* at art. 11.

87. *See id.* ¶ 14.

88. *Id.* at art. 12.

them, thereby reducing the total number of allowances available for trading among installations.⁸⁹ According to the Proposed Directive, this will permit society as a whole to participate while also satisfying the requirements of the United Nations for international emissions trading under the Protocol.⁹⁰

Three months after the beginning of the first five-year period beginning in 2008, all non-valid allowances, not already surrendered or cancelled, shall be cancelled by the competent authority.⁹¹ Each Member State may individually decide whether or not to grant valid replacement allowances to those parties whose allowances were cancelled in this process.⁹² Similarly, allowances shall be cancelled three months after the beginning of each subsequent five-year period.⁹³ However, each Member State will then be required to grant replacement allowances.⁹⁴

2. Allowance Trading

Member States must guarantee that allowances may be transferred without restriction within the EU and are mutually recognized.⁹⁵ As a result, Member States must establish national registries to track the holder, transfer and cancellation of allowances.⁹⁶ These national registries will be linked and will provide verification that the EU and Member States are complying with their Protocol commitments.⁹⁷ The European Commission will designate a central administrator to oversee these registries and to monitor irregular activities.⁹⁸

89. *Id.* ¶ 13.

90. Proposed Directive, *supra* note 4, ¶ 13.

91. *Id.* at art. 13.

92. *See id.*

93. *Id.*

94. *Id.*

95. *Id.* at art. 12.

96. Proposed Directive, *supra* note 4, at art. 19.

97. *Id.* ¶ 3.

98. *See id.* ¶ 15. The Proposed Directive indicates that this registry system is based, in part, on the Allowance Tracking System implemented under the United States SO₂ trading regime. *See id.*; *see also id.* at art. 20.

Additional guidelines concerning the standardization and security of national registries are to be adopted by the European Commission.⁹⁹

After January 1, 2008, the trading of allowances between installations of different Member States will result in a corresponding change, as recorded on national registries, in the total quantity of emissions allowed for each Member State under the Burden Sharing Agreement.¹⁰⁰ For example, if an installation in Spain sells an allowance to an installation in France, Spain loses its entitlement under the Burden Sharing Agreement to emit a ton of CO₂, whereby France is entitled to emit the corresponding amount. As a result, the EU's total emissions of CO₂ will be maintained at the levels committed to under the Protocol.¹⁰¹ While the Proposed Directive concerns emissions trading within the EU, trading with non-EU parties is also provided for under the Proposed Directive provided that allowances are mutually recognized.¹⁰²

C. *Monitoring and Sanctions*

The European Commission will adopt measures governing the monitoring and reporting of emissions by Member States.¹⁰³ Based on the example of emissions trading programs in the United States, the European Commission has stated that “[t]he strength and environmental integrity of any emissions trading scheme will largely depend upon its compliance provisions and a robust enforcement regime.”¹⁰⁴

Permit holders shall submit, annually, a report to the competent authority and will then proceed with the verification process.¹⁰⁵ Annex V to the Proposed Directive provides a list of verification criteria for the review of such annual reports.¹⁰⁶ In the scenario where an annual report does not conform with specified criteria, the installation will not be authorized to trade allowances until the

99. *See id.* at art. 19.

100. *Id.* ¶ 1.2.

101. *Id.* ¶ 3.

102. Proposed Directive, *supra* note 4, at art. 24.

103. *Id.* at art. 14.

104. *See* Green Paper, *supra* note 12.

105. *See* Proposed Directive, *supra* note 4, at arts. 14, 15.

106. *Id.*; *see also id.* at Annex V.

installation produces a report that is verified and accepted by the competent authority.¹⁰⁷

The Member States must establish sanctions for rule violations and take all necessary measures to apply these sanctions.¹⁰⁸ The Proposed Directive states that such sanctions shall be effective, proportional and dissuasive and that the name of any violating installation shall be published.¹⁰⁹

The Proposed Directive calls for a specific penalty to be applied against those installations that have surpassed the emissions permitted by their held allowances.¹¹⁰ During a transition period beginning January 1, 2005 until January 1, 2008, sanctions shall be the greater of €50 per ton (approximately \$43) of excess CO₂ emitted or two times the average market price of allowances between January 1 and March 31 of the applicable year.¹¹¹ After January 1, 2008, sanctions shall be raised to the greater of €100 (approximately \$86) per ton of excess CO₂ emitted or two times the average market price of allowances between January 1 and March 31 of the applicable year.¹¹² The Proposed Directive indicates that such penalties must be sufficiently high to ensure that it is in the permit holder's interest to purchase sufficient allowances to cover its emissions.¹¹³ In addition to the payment of a penalty for excess CO₂ emissions, the installation must surrender sufficient allowances in the following year to cover the excess emissions of the previous year.

107. *Id.* at art. 15.

108. *Id.* at art. 16.

109. *Id.*

110. *See id.* at art. 16.

111. *See Proposed Directive, supra* note 4.

112. *Id.* Previously, the proposed penalty for non-compliance had been set at €200 (approximately \$175). *See eceee news, Emission Trading Pill Sweetened, available at* http://www.eceee.org/latest_news/2001/News20011003b.lasso.

113. *See Proposed Directive, supra* note 4, ¶ 17.

IV. EXISTING EU PROGRAMS AND PROPOSED DIRECTIVE
COMPATIBILITY CONCERNS

While awaiting the final directive, Member States have been studying the feasibility of emissions trading programs, and certain Member States have taken interim emissions reduction measures. For example, Germany has implemented a system of voluntary non-binding agreements with polluting facilities that Germany anticipates will help it achieve its commitments under the Kyoto Protocol.¹¹⁴

However, the United Kingdom and Denmark, for example, have already adopted emissions trading programs that vary substantially from the trading program under the Proposed Directive. The United Kingdom's emissions trading program is voluntary and applies to all six greenhouse gases.¹¹⁵ This program provides for various participants, including facilities that participate in an auction¹¹⁶ to receive voluntary emissions targets in exchange for government cash incentives.¹¹⁷ Adopted in 1999, the Danish CO₂ emissions trading

114. See, e.g., Planet Ark Environmental News, *German industry slams EU emissions trading plan* (Aug. 29, 2001), at <http://www.planetark.org/dailynewsstory.cfm/newsid/12190/story.htm>.

115. See, e.g., DEP'T OF THE ENV'T, TRANSP. & THE REGIONS, FRAMEWORK DOCUMENT FOR THE UK EMISSIONS TRADING SCHEME (2001), available at http://www.defra.gov.uk/environment/climate_change/trading/draft/pdf/trading.pdf (last visited Mar. 22, 2002). "This emissions trading scheme is a key part of our climate change program which is on course to deliver our Kyoto commitments, and to meet our domestic goal of cutting CO₂ emissions to 20 percent below 1990 levels by the year 2010." *Id.* at 5 (citing the Minister for Environment, Michael Meacher) (on file with the *Fordham Environmental Law Journal*).

116. *Id.*

117. The United Kingdom's emissions trading program is backed by a government incentive that may amount up to £215 (approximately \$309) million spread over a five-year period from 2003/04 to 2007/08. *Id.* In anticipation of this program becoming effective in April 2002, DuPont sold 10,000 tons of 2002 CO₂ equivalent allowances to MIECO Inc. of Japan in September 2001. eceee news, *Early start for UK carbon trading*, (Sept. 24, 2001), available at http://www.eceee.org/latest_news/2001/News20010924b.lasso.

system applies only to CO₂ emissions from its recently liberalized electricity production sector; SO₂ and nitrogen oxides (NO_x) emissions from Danish power plants are governed by non-tradable allowances.¹¹⁸

With various emissions trading and reduction programs already in place throughout Europe, the European Commission is facing considerable debate concerning the structure of an EU-wide emissions trading program. For example, based in part on principle or concerns of compatibility with existing programs, countries such as the United Kingdom, Germany and Italy have expressed their opposition to the mandatory nature of the EU-wide trading system under the Proposed Directive.¹¹⁹ The EU Environment Commissioner, Margot Wallström, has responded to such concerns by stating that results of a voluntary emissions reduction program, unlike the proposed mandatory EU-wide program, are limited in their effectiveness by the number of facilities that wish to participate in the program and that such programs hamper competition by creating unequal opportunities.¹²⁰

CONCLUSION

The Proposed Directive provides the general outline for a potentially successful multilateral emissions trading system within the EU. As the recent COP negotiations in Marrakech demonstrated, the EU and each Member State are vested with a specific responsibility now that the United States refuses to ratify the Protocol.¹²¹ Based on its unique legal structure and single economic space among fifteen countries, the EU provides an exceptional forum to test the feasibility of a truly international emissions trading

118. Sigurd Lauge Pederson, *The Danish CO₂ Emissions Trading System*, 9 REV. OF EUR. COMMUNITY & INT'L ENVTL. L., 223, 224 (2000). Denmark's electricity production sector is responsible for more than 45% of all domestic greenhouse gas emissions. Planet Ark Environmental News, *Danish Emission Trading To Start In January 2001* (Mar. 30, 2000), available at <http://www.planetark.org/dailynewsstory.cfm?newsid=6166>.

119. Laurence Frost, *Wallström Under Pressure To Accept Voluntary CO₂ Cuts*, EUROPEAN VOICE, Dec. 6–12, 2001, at 23.

120. *Id.*

121. See PEW CTR. OF GLOBAL CLIMATE CHANGE, *supra* note 6.

system. A successful EU experience with such a program will help to set an important precedent that such trading programs may, in practice, prove to be valuable instruments in helping to efficiently reduce greenhouse gas emissions on a global level.