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Past Is Prologue: Recent Carbon Regulation Disputes in Europe Shape the U.S. Carbon Future

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PAST IS PROLOGUE: RECENT CARBON REGULATION DISPUTES IN EUROPE SHAPE THE U.S. CARBON FUTURE

Cameron Ferrey and Steven Ferrey*
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EDITOR'S PERSPECTIVE

With the December debate looming concerning the continuation of the Kyoto Protocol taking place in Copenhagen, our article, *Past is Prologue: Recent Carbon Regulation Disputes in Europe Shape the U.S. Carbon Future*, written by Cameron Ferrey and Steven Ferrey, is a very thoughtful and timely piece. After explaining some of the similarities between the European Union and the United States, the authors explore the Kyoto Protocol and the cap-and-trade mechanism, which world economies use to regulate carbon. By demonstrating the stakeholders' disputes in both the European Union and the United States, the authors predict that "past is prologue" and some of the same struggles and disputes that occurred in the European Union are going to occur in the United States as it tries to regulate carbon.

The first case note, written by Kevin Dothager, examines a Western District of North Carolina decision which holds that certain plants within 100 miles of the North Carolina border contributed enough pollution to be considered a public nuisance. In its holding, the court orders an injunction to force the Tennessee Valley Authority to install available pollution control measures. Based on Missouri nuisance law, Kevin argues that Missouri, ranking ninth in the use of coal produced power plants, could be susceptible to public nuisance claims from a neighboring state and examines what costs could be passed onto Missouri households if such claims were brought.

Michael C. Risberg authored the next case note, which explores a Sixth Circuit's holding that the EPA's rule, that pesticides applied in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act are exempt from the Clean Water Act's permitting requirements, was improper. After examining the reasoning and soundness of the court's decision, Michael argues that placing more stringent requirements on biological pesticides than chemical pesticides would be inconsistent with the goals of the Clean Water Act, and that the court's holding could negatively affect the environment and could invalidate the parts of the National Pollutant Discharge Elimination System's general permitting process that makes it a preferable alternative to individual permits.

The third case note, written by Erin P. Seele, examines the Western District of Missouri's decision which holds the City of St. Louis and the City of St. Louis Airport Authority responsible for ninety-nine violations of the National Pollutant Discharge Elimination System by demolishing buildings still containing asbestos. In its holding, the court affirms the EPA's long-standing, but never binding, opinion that a group of four or more single-family residences owned or controlled by the same operator are subject to the National Pollutant Discharge Elimination System. Erin examines this holding and the court's new standard to overcome summary judgment under the Resource Conservation and Recovery Act's imminent and substantial endangerment claim and its possible environmental impacts.

Brian Schierding authored the final case note which explores the United States Supreme Court decision in *Winter v. NRDC*. In deciding that the interest of having sonar-trained naval personnel far outweighed the potential environmental impacts on marine mammals, the Court held that the test for a preliminary injunction should be whether irreparable harm was likely and that the four factors for a preliminary injunction should now be examined together. Brian examines the Court's holding, which rules in favor of the Navy, and argues that the new standard for preliminary injunctions makes it easier for the military to succeed in these types of cases and hurts advocates who are trying to protect the environment from the United States military.

This edition ends with seven updates on recently decided environmental cases from courts around the country.

I want to acknowledge the hours spent perfecting the footnotes by Michael C. Risberg, the Managing Editor, as well as Kevin Dothager, Matt Arens, and Abbie Hesse Rothermich, the Associate Managing Editors. Robert A. Noce, the Lead Articles Editor, deserves recognition for not only diligently and thoughtfully reviewing article submissions throughout the summer but also helping to check footnotes. I would also like to recognize the Note and Comment Editors, Rachel Riley and Caleb Colbert, who helped grade this year's write-on competition, and Chelsea R. Mitchell, who provided many thoughtful editorial comments to this edition's case notes. Nicole Huston, the Associate Editor-In-Chief,

deserves recognition for helping over-see the write on competition, helping edit the edition, and ensuring that everything runs smoothly. I would like to welcome our new associates who will no doubt help improve and ensure the success of this journal. Finally, Dean Lambert deserves thanks for serving as our faculty advisor.

Erin P. Seele
Editor-In-Chief

ABSTRACT

With looming and necessary regulation of carbon emissions and global warming, past is prologue. The significant, and often obscured, conflicts that recently erupted in the European Union (hereinafter "EU") to regulate carbon pursuant to the Kyoto Protocol, forecasts similar looming conflicts among U.S. stakeholders as the U.S. attempts to implement carbon regulation. These conflicts inside the EU, and prologue for the upcoming U.S. development of carbon protocol, fall into a handful of categories:

Conflict over the auction of CO₂ emission rights instead of continued allocation of emission rights without charge to traditional emitters. Carbon regulation represents the first time in world history that a significant quantity of emission rights have been auctioned, and will skew significantly the regulatory and economic costs of production in affected industries.

Less developed states are resisting moderately aggressive carbon regulation, asking more developed states to bear more of the carbon reductions.

States more dependent on coal-fired electric generation are more resistant to CO₂ regulation. This regulation will impose significantly higher costs on areas utilizing traditional coal-fired power.

Emerging changes for centralized control over carbon emissions, superceding individual state control over carbon emission credit amounts and allocations to local industry. While an international problem, even the Kyoto Protocol has no enforcement mechanism should a country not meet its reductions.

The speed of implementation of carbon reductions is now being questioned, especially in a time of economic recession. That recession, alone, tends to lower economic activity and carbon emissions, and strains resources to absorb the costs of additional carbon control.

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This article makes an international comparison of the nature of the European carbon dispute and how it signals similar problems in the U.S. context. There is close parallel between the mushrooming and unresolved carbon conflict among countries in the EU, compared to looming battles over U.S. carbon regulation. Past is prologue. It is not surprising that similar differences among both the European and U.S. states' degree of development, regional reliance on high-carbon coal resources, recourse to carbon auction as a revenue source, and defense of states' rights as opposed to a centralized multi-state solution, are creating parallel frictions as the U.S. develops a climate change policy.

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**PAST IS PROLOGUE: RECENT CARBON REGULATION
DISPUTES IN EUROPE SHAPE THE U.S. CARBON FUTURE**

I. INTRODUCTION: WHERE PAST IS PROLOGUE

“What is past is prologue.”¹ An increasingly contentious European experience trying to control carbon emissions is prologue for the imminent U.S. entry into carbon control. There are significant similarities between the EU countries and the U.S. states:

There are forty-four European countries and fifty U.S. states, each group producing a relatively equal percentage of world gross domestic product.

The EU contains 500 million people and has 750 gigawatts (hereinafter “GW”) of power generating capacity, while the U.S. has 325 million people with about 950 GW of power generating capacity.

The basic electric power technologies and extent of service are similar, with only small differences in power prime movers and technologies.

Twenty-seven EU countries and twenty-three U.S. states are regulating carbon.

The amount of CO₂ emissions in the EU has increased about one percent annually, instead of shrinking,² parallel to that of the U.S.

The contention in the EU over the form and scope of carbon regulation has closely tracked whether to auction CO₂ emission allowances, degree of regional dependence on coal-fired power, accommodation of hesitant late entrants to the carbon regime, centralized control by a larger authority, and speed of reduction of carbon. These are issues involving technology and political governance foreshadowing the

¹ WILLIAM SHAKESPEARE, *THE TEMPEST* act 2, sc. 1.

² Leila Abboud, *EU Greenhouse-Gas Emissions Rose 1.1% Last Year; Cap and trade Wins on Market, but Problem Grows*, WALL ST. J., April 3, 2008, at A9.

U.S. debate on carbon. In the EU, clear policy lines have formed between the original EU-15 countries, and the later-joining former Eastern Block entrants. The dissenters have enough votes to block consensus. Similarly, in the U.S., twenty-three states have embarked on carbon regulation, with the other half of the states choosing not to join the voluntary carbon schemes.

This article tracks both these recent EU disputes, and the beginnings of similar issues emerging in the U.S. debate. There is no time for an endless debate: amid need for immediate effective action, the world may be approaching a "tipping point" in less than a decade, where, without dramatic reduction of emission of greenhouse gases (hereinafter "GHGs"), the chance to implement successful global warming policy declines precipitously.³ These debates must be successfully resolved on both sides of the Atlantic for world carbon regulation, and Kyoto, to succeed.

Cap-and-trade is the regulatory mechanism with which world economies have decided to regulate carbon emissions. Cap-and-trade is the establishment of emission limits on certain sources, allocation of the legal rights to emit, and the ability of entities to trade for more or less quantity of such allowances. New U.S. Energy Secretary, Steven Chu, has announced that he and President Obama support a simple cap-and-trade system for the U.S., which would "integrate" with the systems in the EU.⁴

The European Union Greenhouse Gas Emission Trading System (hereinafter "EU-ETS") carbon regulation was implemented effective 2005 as a parallel CO₂ regulatory system with an earlier start for the now twenty-seven EU-member countries and three other participating European countries (Norway, Iceland, and Liechtenstein) that also are

³ James Hansen et al., *Target Atmospheric CO₂: Where Should Humanity Aim?*, 2 OPEN ATMOSPHERIC SCI. J. 217, 225-26, available at <http://www.bentham-open.org/pages/content.php?TOASCJ/2008/00000002/00000001/217TOASCJ.SGM>; Bill McKibben, *Civilization's Last Chance: The Planet is Nearing a Tipping Point on Climate Change, and It Gets Much Worse Fast*, L.A. TIMES, May 11, 2008, available at <http://www.latimes.com/news/printedition/opinion/la-op-mckibben11-2008may11,0,2392815.story>.

⁴ *New DOE Secretary Backs Cap-and-Trade*, CARBON CONTROL NEWS, Jan. 13, 2009.

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covered by the Kyoto Protocol.⁵ The EU is the only region of the world yet to have implemented a cap-and-trade system for GHGs.⁶ However, twenty-three U.S. states joined by four Canadian provinces, under four different regulatory regimes, are also moving forward on cap-and-trade carbon regulation.⁷ The Obama administration and Energy Secretary Chu have also endorsed a cap-and-trade carbon scheme.⁸

The EU-ETS covers CO₂ emissions at approximately 5,000 companies at 12,000 industrial sites, unlike the Kyoto Protocol which covers all GHGs.⁹ The EU-ETS utilizes National Allocation Plans for the (free) distribution of carbon emission allowances.¹⁰ The quantity of allowances a nation can issue is governed by eleven EU-ETS criteria, but otherwise national discretion is not explicitly proscribed by the EU.¹¹ In its second allocation round for national allowances to emit CO₂, the European Commission plans to centrally determine future national

⁵ The EU-ETS entered into force on 25 October 2003. Council Directive 2003/87, Establishing a Scheme for Greenhouse Gas Emission Allowance Trading Within the Community and Amending Council Directive 9/61/EC, 2003 O.J. (L 275) 32 (EC) [hereinafter Council Directive 2003/87], available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:275:0032:0046:EN:PDF>.

⁶ FRANK CONVERY ET AL., MIT GLOBAL CHANGE SCIENCE POLICY, REPORT NO. 162, THE EUROPEAN CARBON MARKET IN ACTION: LESSONS FROM THE FIRST TRADING PERIOD 19 (2008), available at

http://globalchange.mit.edu/files/document/MITJPSPGC_Rpt162.pdf.

⁷ See discussion *infra* Part II.b-d.

⁸ *New DOE Secretary Backs Cap-and-Trade*, *supra* note 4.

⁹ *Compare* Our climate in EU – EU ETS,

<http://www.ourclimate.eu/ourclimate/ourclimate/euets.aspx> (last visited July 11, 2009), with Kyoto Protocol to the United Nations Framework Convention on Climate Change art. 3, Dec. 11 1997, 2303 U.N.T.S. 148 [hereinafter Kyoto Protocol], available at <http://unfccc.int/resource/docs/convkp/kpeng.pdf>.

¹⁰ Council Directive 2003/87, *supra* note 5, arts. 9-11.

¹¹ See *id.* annex III; *Communication from the Commission on Guidance to Assist Member States in the Implementation of the Criteria Listed in Annex III to Directive 2003/87/EC Establishing a Scheme for Greenhouse Gas Emission Allowance trading Within the Community and Amending Council Directive 96/61/EC, and on the Circumstances Under Which Force Majeure is Demonstrated*, COM (2003) 830 final (Jan. 7, 2004), available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2003:0830:FIN:en:PDF>.

allowances.¹² Similarly, in the four U.S. systems of carbon regulation governing twenty-three states, ten states in the Regional Greenhouse Gas Initiative (hereinafter "RGGI") regulate only CO₂, while other states indicate willingness to regulate a wider spectrum of GHGs.¹³

Despite the failure of the U.S. to ratify the Kyoto Protocol, about half of the U.S. states are individually or collectively enacting carbon regulation that is not dissimilar to the Kyoto Protocol. The states are attempting to combine to act in groups of six to ten states, which collectively make each such state group more significant in terms of carbon emissions than many of the thirty-nine major Annex I developed countries regulated under the Kyoto Protocol.

The RGGI program involves ten Northeastern states, commencing in 2009 as the first CO₂ regulation in the U.S.¹⁴ CO₂ emissions from large power plants in the region will be capped at current levels until 2015, thereafter incrementally reducing emissions by a cumulative ten percent by 2019.¹⁵ California, alone, is the twelfth largest GHG producer in the world.¹⁶ California is larger in its carbon emissions than two-thirds of the regulated Annex I developed nations under the Kyoto Protocol. California's landmark state legislation establishes a comprehensive cap-and-trade program, to commence in 2012, to reduce its aggregate GHG emissions to 1990 levels by 2020. This equates to an eventual estimated twenty-five to twenty-nine reduction from business-as-usual levels.¹⁷ The

¹² CONVERY ET AL., *supra* note 6, at 10.

¹³ See discussion *infra* Part II.b-d.

¹⁴ Reg'l Greenhouse Gas Initiative, Memorandum of Understanding (Dec. 20, 2005) [hereinafter RGGI MOU], available at http://www.rggi.org/docs/mou_final_12_20_05.pdf.

¹⁵ Press Release, Reg'l Greenhouse Gas Initiative, States Reach Agreement on Proposed Rules for the Nation's First Cap-and-Trade Program to Address Climate Change 2 (Aug. 15, 2006), available at http://www.rggi.org/docs/model_rule_release_8_15_06.pdf.

¹⁶ MICHAEL PEEVEY, CAL. ENERGY COMM'N & CAL. PUBIC UTIL. COMM'N, PROPOSED FINAL OPINION SUMMARY ON GREENHOUSE GAS REGULATORY STRATEGIES 2 (2008).

¹⁷ CAL. ENERGY COMM'N & CAL. PUB. UTIL. COMM'N, PROPOSED FINAL OPINION SUMMARY ON GREENHOUSE GAS REGULATORY STRATEGIES 1 (2008), available at <http://www.energy.ca.gov/2008publications/CEC-100-2008-004/CEC-100-2008-004.PDF>; M.J. Bradley & Associates, LLC, Climate Change Briefing: California Global Warming Solutions Act of 2006, <http://www.mjbradley.com/briefingspecialab32.html> (last visited July 12, 2009).

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RGGI in ten Eastern states, but not California, immediately auctions, rather than freely allocates, cap-and-trade allowances.

There are two regional carbon cap-and-trade initiatives in the U.S., each involving multiple states and Canadian provinces. The Western Climate Initiative (hereinafter “WCI”) includes seven very different U.S. states in terms of their energy resource usage including the West coast states, Arizona, New Mexico, Montana and Utah, as well as five provinces of Canada,¹⁸ with a regional, economy-wide goal to reduce GHG emissions to fifteen percent below the 2005 levels by 2020. The seven WCI states represent more than twenty percent of the U.S. economy, and the four associated Canadian provinces represent seventy percent of the Canadian economy. WCI will start with a minimum ten percent allowance auction in 2012, ramping up to a minimum twenty-five percent auction by 2020. In the center of the nation, six Midwestern states and one Canadian province executed a regional GHG cap-and-trade emission reduction strategy.¹⁹

II. COMPARATIVE CAP-AND-TRADE CARBONISM

A. *The Legal Construct of the Kyoto Protocol*

The Framework Convention on Climate Change (hereinafter “UNFCCC”) treaty was agreed to at the Rio de Janeiro U.N. Conference on Environment and Development in 1992 and the Kyoto convention in

¹⁸ See Western Climate Initiative, <http://www.westernclimateinitiative.org/> (last visited Aug. 2, 2009). The states of Alaska, Kansas, Colorado, Wyoming, Idaho and Nevada, the Canadian provinces of Saskatchewan and Nova Scotia, and six Mexican states, Baja California, Sonora, Chihuahua, Coahuila, Nuevo Leon, and Tamaulipas will participate in WCI as observers. *Id.*

¹⁹ See Midwestern Governor’s Ass’n, Midwestern Energy Sec. & Climate Stewardship Summit, Midwestern Greenhouse Gas Accord (Nov. 15, 2007), *available at* http://www.midwesterngovernors.org/Publications/Greenhouse%20gas%20accord_Layout%201.pdf.

1997.²⁰ In the Rio Declaration, the principle of “common but differentiated responsibility” was articulated²¹ and the UNFCCC created the conference of the parties,²² a multinational working group, to administer the carbon mitigation scheme. The Rio Declaration was signed by 154 countries.²³ The “Kyoto Protocol” received subsequent national adoption by fifty-five percent of Annex I (developed country) party signatories by February 2005, which achieved the minimum required ratification by nations and then entered into effect.²⁴ In recent contemporaneous rounds of discussion, more than 180 countries attended the Bali Conference in 2007. More than 175 of these nations had by 2007 previously ratified the Protocol to take effect in 2008, although most were not subjected to any requirements thereunder.²⁵

The Kyoto Protocol, not ratified prominently by the U.S. and for a time, Australia, requires those thirty-eight developed nations by 2012 to reduce CO₂ emissions to an average of six percent below the 1990

²⁰ See United Nations Framework Convention on Climate Change, May 9, 1992, 1771 U.N.T.S. 107 [hereinafter UNFCCC], available at <http://unfccc.int/resource/docs/convkp/conveng.pdf>.

²¹ United Nations Conference on Environment and Development, Rio de Janeiro, Brazil, June 3-14, 1992, *Rio Declaration on Environment and Development*, princ. 7, U.N. Doc. A/CONF.151/26 (Aug. 12 1992), available at <http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm>.

²² UNFCCC, *supra* note 20, art. 7.

²³ United Nations Division for Sustainable Development – Agenda 21, <http://www.un.org/esa/sustdev/documents/agenda21/index.htm> (last visited June 1, 2009).

²⁴ United Nations Framework Convention on Climate Change, Status of Ratification, http://unfccc.int/kyoto_protocol/status_of_ratification/items/2613.php (last visited Oct. 19, 2008). Russia’s adoption of the treaty provided the required number of countries for the treaty to having binding effect. See generally Steven Lee Myers, *Russia’s Lower House Approves Kyoto Treaty on Emissions*, N.Y. TIMES, Oct. 23, 2004, at A2, available at <http://www.nytimes.com/2004/10/23/international/europe/23kyoto.html> (reporting effects of Russian adoption).

²⁵ PETER D. CAMERON, *History of Climate Change and Policy*, in CLIMATE CHANGE: A GUIDE TO CARBON LAW AND PRACTICE 23, 35 (Paul Q. Watchman ed., 2008); see generally The United Nations Climate Change Conference in Bali, http://unfccc.int/meetings/cop_13/items/4049.php (last visited June 1, 2009).

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baseline levels.²⁶ The other GHGs must be reduced to between five to seven percent below either the 1990 or 1995 baseline levels effective by 2008 to 2012.²⁷ Developing nations successfully resisted efforts to include their emissions in binding international obligations and opposed encouraging its voluntary commitments to GHG reduction.²⁸ Kyoto reflects “common but differentiated” responsibilities between developed and developing countries.²⁹ The largest CO₂ emitter in the world, China, is not covered as an Annex I covered country.³⁰ Under Kyoto, there is no responsibility assigned to developing countries.³¹

²⁶ See Kyoto Protocol, *supra* note 9, annex B. The Kyoto Protocol received subsequent national adoption by fifty-five parties to the Convention, notably excluding the U.S., by February 2005 and then entered into effect. Kyoto Protocol: Status of Ratification, http://unfccc.int/files/kyoto_protocol/status_of_ratification/application/pdf/kp_ratification_20090708.pdf (last visited Aug. 8, 2009). While most countries have committed to achieve an eight percent reduction below 1990 levels for CO₂, *see* Kyoto Protocol, *supra* note 9, annex B, there has been a reallocation among European Union countries so that some countries are allowed to emit more than these baseline levels while others are required to reduce up to twenty-eight percent, with the weighted average for the European Union overall being eight percent reduction. *See infra* text accompanying notes 32-33; *see also* Kyoto Protocol, *supra* note 9, art. 4(1) (granting the EU the authority to devise an agreement among member states to jointly meet the EU’s collective commitment).

²⁷ Kyoto Protocol, *supra* note 9, art. 3(7)-(8). For six GHGs that are suspected of causing global warming, principally including CO₂ and methane (CH₄), major developed countries have targets for the reduction of these GHGs during the period 2008-2012. *Id.* art. 3(1), annex A. One hundred eighty-six countries and one regional economic integration organization have ratified the Protocol. Kyoto Protocol: Status of Ratification, *supra* note 26.

²⁸ Paul G. Harris, *Common but Differentiated Responsibility: The Kyoto Protocol and United States Policy*, 7 N.Y.U. ENVTL. L.J. 27, 33-34 (1999).

²⁹ Kyoto Protocol, *supra* note 9, art. 10 (“All Parties, taking into account their common but differentiated responsibilities . . .”). The concept was originally part of the Montreal Protocol on Substances that Deplete the Ozone Layer arts. 5, 10, Sept. 16, 1987, S. TREATY DOC. NO. 100-10, 1522 U.N.T.S. 3 [hereinafter Montreal Protocol] (amended by the London Amendments to the Montreal Protocol on Substances that Deplete the Ozone Layer, June 29, 1990, S. TREATY DOC. NO. 103-9, 30 I.L.M. 537).

³⁰ See Kyoto Protocol, *supra* note 9, annex B (providing Annex I countries); List of Non-Annex I Parties to the Convention,

The Kyoto Protocol is a cap-and-trade regulatory construct. Each of the thirty-eight developed nations is allocated a national emissions cap, which applies to certain large industrial emitters of carbon within the country. At the end of each compliance period (year), each emitter must have acquired enough credits to cover its emissions of carbon during that period, either through allocation from its governments or by acquiring, through purchase or trade, additional allocation credits. In essence, each emitter must cover its emissions with regulatory allowances or newly created offset credits to emit carbon.

The participating regulated Annex I EU countries made significant political differentiation among its responsibilities to reduce carbon emissions ranging from a twenty-eight percent carbon reduction (Luxembourg) to an allowed twenty-seven percent carbon increase (Portugal).³² Australia is allowed to increase emissions up to eight percent, while Russia, Ukraine, and New Zealand have no reduction requirements.³³

Annex I regulated countries must set up national registries to issue its internationally assigned amount units (hereinafter "AAUs").³⁴ Registry removal units (hereinafter "RMUs"), reflecting removal of GHGs due to forestry and land-use practices, also are tracked.³⁵ Each AAU and RMU is

http://unfccc.int/parties_and_observers/parties/non_annex_i/items/2833.php (last visited Oct. 18, 2008) (including China in Non-Annex I parties to Kyoto).

³¹ See Kyoto Protocol, *supra* note 9, *passim*.

³² ANTHONY HOBLEY, *Creating a Global Carbon Market*, in CLIMATE CHANGE: A GUIDE TO CARBON LAW AND PRACTICE, *supra* note 25, at 127, 129.

³³ *Id.* at 129.

³⁴ United Nations Framework Convention on Climate Change, Conference of the Parties, Marrakesh, Morocco, Oct. 29-Nov. 10, 2001, *Report of the Conference of the parties on its Seventh Session—Part Two: Action Taken by the Conference of the Parties (Volume II)*, dec. 19/CP.7, U.N. Doc. FCCC/CP/2001/13/Add.2 (Jan. 21, 2002) [hereinafter Marrakesh Accords].

³⁵ See U.N. Framework Convention on Climate Change, Conference of the Parties Serving as the Meeting of the Parties to the Kyoto Protocol, Montreal, Can., Nov. 28-Dec. 10, 2005, *Report of the Conference of the Parties Serving as the Meeting of the Parties to the Kyoto Protocol—Part Two: Action Taken by the Conference of the Parties Serving as the Meeting of the Parties at its First Session*, dec. 13/CMP.1, annex, paras. 25, 32, U.N. doc. FCCC/KP/CMP/2005/8/Add.1 (Mar. 30, 2006) [hereinafter COP/MOP-1 Report—Part Two], *available at*

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tracked with a unique serial number.³⁶ AAUs and RMUs are converted into Emission Reduction Units (hereinafter “ERUs”) for international trading purposes.³⁷ Emission trading is allowed under the Kyoto Protocol.³⁸ Therefore, any party can purchase EU credits, even if they do not require them for compliance. This includes those traders who wish to speculate in these regulatory commodities.

Despite Kyoto and its binding requirements on EU countries, European GHG emissions in industrialized European countries are increasing.³⁹ All EU countries are forecasted to miss their Kyoto targets, with the exception of two former Soviet countries.⁴⁰ Among the developed countries covered by the Kyoto Protocol, only Russia and Poland are expected to satisfy their 2010 targets, and this is because of the economic collapse in those countries that shattered many existing CO₂ emission sources.⁴¹

Most excess allocated emission allowances are held by Russia and Ukraine.⁴² These are expected to be in excess of 791.5 million metric tons of CO₂ equivalent per year by 2010.⁴³ These excess emission allowances are approximately thirty-three percent of validated Clean Development Mechanism (hereinafter “CDM”) emissions reductions as of May 1, 2007, and almost one-half the number of Certified Emission Reductions

<http://unfccc.int/resource/docs/2005/cmp1/eng/08a02.pdf>.

³⁶ Marrakesh Accords, *supra* note 34, dec. 19/CP.7, annex, paras. 24, 27.

³⁷ COP/MOP-1 Report—Part Two, *supra* note 35, dec. 12/CMP.1, annex, para. 29.

³⁸ Kyoto Protocol, *supra* note 9, art. 17; Marrakesh Accords, *supra* note 34, dec. 18/CP.7.

³⁹ Press Release, U.N. Framework Convention on Climate Change, 2006 UNFCCC Greenhouse Gas Data Report Points to Rising Emission Trends (Oct. 30, 2006) (showing an eleven percent increase in GHG emissions from 1990-2004, excluding economies in transition in eastern and central Europe), *available at* http://unfccc.int/files/press/news_room/press_releases_and_advisories/application/pdf/20061027_ghg_press_release_final_english.pdf.

⁴⁰ Ray Purdy, *The Legal Implications of Carbon Capture and Storage Under the Sea*, SUSTAINABLE DEV. L. & POL’Y, Fall 2006, at 22.

⁴¹ *Id.*

⁴² Craig A. Hart, *The Clean Development Mechanism: Considerations for Investors and Policymakers*, 7 SUSTAINABLE DEV. L. & POL’Y 41, 44 (2007).

⁴³ *Id.*

(hereinafter “CERs”)⁴⁴ expected to be issued assuming a validation estimate error of twenty-seven percent.⁴⁵ Aside from EU countries, Canada and Japan are projected to miss their interim 2010 targets by 500 million tons of CO₂.⁴⁶ Japan’s emissions are rising and Canada has backed away from its target obligations.⁴⁷

Kyoto includes the creations of CDM “offsets,” called CERs.⁴⁸ Including offsets in a cap-and-trade system, offers several advantages:

It allows lower-cost reduction opportunities outside the capped countries to be pursued as lower-cost reduction options;
Economic sectors that are covered by the carbon emissions caps can be the source for reductions. This can include emission sources not otherwise cost-effectively addressed; and
It can promote technology transfer to developing countries.

Industrial emitters in each country are able to trade emission credits or create new credits through mechanisms to possess additional credits. The CDM allows projects that reduce greenhouses gases in developing nations to earn CERs for each ton of CO₂-equivalent of GHG reduced.⁴⁹ Those CERs are then traded or sold to activities in Annex I developed countries which increases those countries’ emission cap allocated in the Protocol.⁵⁰ All emissions reduction CERs certified under

⁴⁴ See *infra* text accompanying notes 48-55.

⁴⁵ Hart, *supra* note 42, at 45.

⁴⁶ See Jeffrey Ball, *Kyoto’s Caps on Emissions Hit Snag in Marketplace*, WALL ST. J., Dec. 3, 2007, at A-1 tbl., available at <http://online.wsj.com/article/SB119664561728211237.html>.

⁴⁷ *Id.*

⁴⁸ Kyoto Protocol, *supra* note 9, art. 12(3).

⁴⁹ *Id.* art. 12(3)(a); Marrakesh Accords, *supra* note 34, dec. 17/CP.7, annex, para. 1(b).

⁵⁰ Kyoto Protocol, *supra* note 9, art. 12(3)(b). Credits earned after 2000 can be used to achieve compliance during first commitment period, which begins in 2008. *Id.* art. 12(10). Two and one half percent of ERUs and CERs may be carried over to the second phase of implementation after 2012. Marrakesh Accords, *supra* note 34, dec. 19/CP.7, annex, para. 15(a)-(b).

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the CDM are required by the Protocol to be voluntary, real, and additional to any that would occur in the absence of the CDM credit system.⁵¹

The CDM apparatus emerged as a last-minute compromise creation at the 1997 Kyoto Conference.⁵² It is patterned on the U.S. sulfur dioxide (SO₂) trading experience under the Clean Air Act amendments of 1990.⁵³ The use of offsets for compliance creates extraterritorial international compliance options to meet in-country Kyoto requirements; by increasing supply of options and credits, offsets decrease total costs of compliance by an estimated seventy-one percent.⁵⁴ CERs (other than for afforestation) have a seven-year lifetime, with the possibility of two renewals, for a total of twenty-one years, or in the alternative one ten-year lifetime.⁵⁵

A second mechanism for compliance is Joint Implementation (hereinafter "JI"), where developed nation signatory parties can implement projects domestically or in other Annex I nations that remove GHGs or create additional carbon sinks, which are then quantified in an ERU.⁵⁶ JI projects are undertaken by Annex I countries.⁵⁷ An ERU transfers a unit of allowed carbon emissions from a selling country's cap to the purchasing country. Unlike a CDM CER, which creates an additional emission unit added to the cap, a JI project transfers a credit under the existing cap from one nation to another nation, as a zero-sum transaction.⁵⁸ However, JI

⁵¹ Kyoto Protocol, *supra* note 9, art. 12(5)(a)-(c).

⁵² CAMERON, *supra* note 25, at 31.

⁵³ HOBLEY, *supra* note 32, at 132-133.

⁵⁴ U.S. GOV'T ACCOUNTABILITY OFFICE, CARBON OFFSETS: THE U.S. VOLUNTARY MARKET IS GROWING, BUT QUALITY ASSURANCES POSES CHALLENGES FOR MARKET PARTICIPANTS 33 (2008).

⁵⁵ Clean Dev. Mechanism Executive Bd., *Glossary of CDM Terms (Version 04)*, at 14, U.N. Doc. CDM-Glos-04 (Aug. 2, 2008), available at http://cdm.unfccc.int/Reference/Guidclarif/glos_CDM_v04.pdf.

⁵⁶ Kyoto Protocol, *supra* note 9, art. 6(1); Joint Implementation, http://unfccc.int/kyoto_protocol/mechanisms/joint_implementation/items/1674.php (last visited July 11, 2009).

⁵⁷ COP/MOP-1 Report—Part Two, *supra* note 35, dec. 9/CMP.1, annex, para 21.

⁵⁸ Compare Kyoto Protocol, *supra* note 9, art. 6(1)(d) with *id.* art. 12(5)(c). Whereas the CDM process creates additional room in the envelope of permissible carbon emissions by developed nations, the Joint Implementation process transfers a static quantity of existing

projects have less burdensome transaction costs than CDM projects, as the former are approved and administered by the parties involved rather than the U.N. Kyoto Executive Board and JI projects are not subject to detailed periodic monitoring.⁵⁹

CDM projects may only be pursued by Annex I countries.⁶⁰ Since the end of 2006, the World Bank reports that sixty-one percent of CDM projects were located in China, twelve percent in India, seven percent in other Asian countries, ten percent in Latin America (most significantly Brazil), and three percent in Africa.⁶¹ Africa was largely left out of CDM projects.

CDM CERs and JI ERUs are required to be "additional" to baseline project emissions.⁶² This involves the establishment of an individual emissions baseline, taking account of sector reform initiatives, barriers to expansion, and sector expansion plans.⁶³ Environmental groups have questioned the "additionality" of renewable energy projects, if its construction is not because of the value of the offset sale.⁶⁴

Thus, the emission cap of any country includes assigned Kyoto credit units plus RMUs from forestation projects that remove CO₂ from the atmosphere, plus JI ERUs and CDM CERs. The Kyoto Protocol collects thirty-eight developed nations into a voluntary agreement to limit carbon emissions. Each of these nations decides how to impose these limitations on its local industries. Those covered emitters of carbon needing additional allowances can either create or purchase additional

allocated credits under the cap from one developed nation to another. Thus, the emission cap of any country includes assigned Kyoto credit units plus removal units (RMUs) from forestation projects that remove CO₂ from the atmosphere, plus JI ERUs and CDM CERs.

⁵⁹ JOHN MCMORRIS, *Running a Carbon Project, in CLIMATE CHANGE: A GUIDE TO CARBON LAW AND PRACTICE*, *supra* note 25, at 57.

⁶⁰ See Kyoto Protocol, *supra* note 9, art. 12; Marrakesh Accords, *supra* note 34, dec. 17/CP.7.

⁶¹ Lauren Etter, *In China, a Plan to Turn Rice into Carbon Credits*, WALL ST. J., Oct. 9, 2007, at A1 tbl., available at <http://online.wsj.com/article/SB119187524509952568-email.html>.

⁶² Kyoto Protocol, *supra* note 9, arts. 6(1)(b), 12(5)(c).

⁶³ Marrakesh Accords, *supra* note 34, dec. 17/CP.7, annex, para. 45(e).

⁶⁴ *Environmentalists Split Over Support of Offsets for Plant Closures*, CARBON CONTROL NEWS, Aug. 25, 2008, at 1.

allowances through these two mechanisms. Both Kyoto Annex I countries and U.S. private markets have risen with trading platforms for the trading of offsets.⁶⁵ Selling carbon emission credits is typically done through forward contracts.⁶⁶

B. *The East Coast Ten State Regional Greenhouse Gas Initiative*

To fill the vacuum left by the U.S.' decision not to participate in the first two phases of the Kyoto Protocol, many states have taken its own direct regulatory action.⁶⁷ RGGI is the first effort in the U.S., and includes twenty percent of all U.S. states. Beginning in April 2003, Governor George Pataki of New York initiated the effort by inviting neighboring states to participate in a regional cap-and-trade emissions program.⁶⁸ On December 20, 2005, seven states, including Connecticut, Delaware, Maine, New Hampshire, New Jersey, New York, and Vermont entered into an agreement to implement the RGGI.⁶⁹ Since that time, Massachusetts, Maryland, and Rhode Island have agreed to sign the RGGI Memorandum of Understanding (hereinafter "MOU") (collectively all ten states, the "RGGI states").⁷⁰ The principle goal of the MOU is for RGGI states to:

⁶⁵ See, e.g., European Energy Exchange: EEX Startseite, www.eex.de, (last visited Sept. 6, 2009); Welcome to the European Climate Exchange – Home, www.europeanclimateexchange.com (last visited Sept. 6, 2009); Portal – NordPool, www.nordpool.com (last visited Sept. 6, 2009).

⁶⁶ CHRISTOPHER NORTON, *Selling Carbon Credits, in CLIMATE CHANGE: A GUIDE TO CARBON LAW AND PRACTICE*, *supra* note 25, at 71.

⁶⁷ For example, prior to joining any formal agreement, Massachusetts had enacted its own regulations to reduce CO₂ emissions by ten percent below 1997-1999 levels. See 310 MASS. CODE REGS. 7.29 (2008).

⁶⁸ *Seven Northeast States Launch Regional Greenhouse Gas Initiative*, ENV'T NEWS SERV., Dec. 20, 2005, <http://www.ens-newswire.com/ens/dec2005/2005-12-20-05.asp>.

⁶⁹ RGGI MOU, *supra* note 14.

⁷⁰ In January 2007, Massachusetts and Rhode Island, which were originally given the status of observing states, both agreed to formally join RGGI as signatory states. Press Release, State of Mass., Governor Patrick Signs Regional Pact to Reduce Greenhouse Gas Emissions (Jan. 18, 2007), *available at* <http://www.mass.gov/?pageID=pressreleases&agId=Agov3&prModName=gov3pressrele>

commit to propose for legislative and/or regulatory approval a CO₂ Budget Trading Program (the "Program") aimed at stabilizing and then reducing CO₂ emissions within the Signatory States, and implementing a regional CO₂ emissions budget and allowance trading program that will regulate CO₂ emissions from fossil fuel-fired electricity generating units having a rated capacity equal to or greater than 25 megawatts.⁷¹

The market-based design of the RGGI MOU is a cap-and-trade program. "Cap-and-trade systems operate by capping the amount of [CO₂] emissions allowed, distributing [CO₂] emissions allowances to sources up to the cap, and requiring each covered source to have sufficient allowances to cover its [CO₂] emissions at the end of each compliance period."⁷² "CO₂ emission allowances will be allocated to, and traded among, fossil fuel-fired electricity generators within the region that supply electricity to the grid."⁷³

The RGGI Staff Working Group (hereinafter "SWG") finalized the Draft Model Rule (hereinafter "Model Rule") in December of 2008.⁷⁴ The Model Rule is a product of over two years⁷⁵ of work by the SWG and is the foundation upon which the RGGI states will base its individual

ase&prFile=reduce_greenhouse_gases011807.xml; Cf. Press Release, State of R.I., Statement Lt. Gov. Roberts Calls for Rhode Island to Join Regional Greenhouse Gas Initiative (January 23, 2007), *available at* <http://www.ri.gov/press/view.php?id=3423>. Maryland, a predominantly coal-powered electricity generating state, in contrast to the other RGGI states, also subsequently joined RGGI in 2006. Press Release, State of Md., Governor Martin O'Malley Signs Greenhouse Gas Agreement, Climate Change Executive Order (April 20, 2007), *available at* <http://www.gov.state.md.us/pressreleases/070420.html>.

⁷¹ RGGI MOU, *supra* note 14, at 2.

⁷² Edna Sussman, *New York Addresses Climate Change with First Mandatory U.S. Greenhouse Gas Program*, N.Y. ST. B.J., May 2006, at 43, 44.

⁷³ Heddy Bolster, *The Commerce Clause Meets Environmental Protection: The Compensatory Tax Doctrine as a Defense of Potential Regional Carbon Dioxide Regulation*, 47 B.C. L. REV. 737, 744 (2006) (citing RGGI MOU, *supra* note 14, at 2).

⁷⁴ Regional Greenhouse Gas Initiative (RGGI) CO₂ Budget Trading Program – Model Rule, http://www.rggi.org/about/history/model_rule (last visited Aug. 16, 2009).

⁷⁵ *See id.*

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regulatory rules. The Model Rule is used by each state as a starting point for obtaining regulatory or legislative approval of its cap-and-trade program, but all such authorization is accomplished at the individual state levels.

RGGI CO₂ emissions from power plants in the region will be capped at current levels and the cap will remain in place until 2015.⁷⁶ RGGI states would then begin the process of incrementally reducing emissions, with the goal of achieving a ten percent reduction by 2019.⁷⁷ By 2020, the program is expected to reach an emissions reduction of approximately thirty-five percent from a business-as-usual unregulated carbon scenario.⁷⁸

One significant aspect of the Model Rule is its requirement that each state reserve a minimum of twenty-five percent of that state's allowances for "consumer benefit or strategic energy purpose[s]."⁷⁹ This translates to using the proceeds from wholesale auction of allowances. Consumer benefits could range from using the money to actually supplement consumer electricity bills or funding state-run energy efficiency programs, to refunding amounts to consumers, to putting the money back into the state coffers. Generators can then sell any excess allowances or purchase additional allowances from other qualifying power producers.

C. Carbon Regulation in California

California is the twelfth largest GHG producer in the world.⁸⁰ Imported electricity contributes more GHG emissions (fifty-two percent) than electricity produced in California, even though seventy-eight percent

⁷⁶ RGGI MOU, *supra* note 14, para. 2C. The regional base annual CO₂ emissions cap will be equal to 121 million short tons. *Id.* para. 2B.

⁷⁷ Press Release, Reg'l Greenhouse Gas Initiative, *supra* note 15, at 2.

⁷⁸ *Id.*

⁷⁹ REG'L GREENHOUSE GAS INITIATIVE MODEL RULE § 5.3(a)-(b) (2008), *available at* <http://www.rggi.org/docs/Model%20Rule%20Revised%2012.31.08.pdf>.

⁸⁰ CAL. ENERGY COMM'N & CAL. PUB. UTIL. COMM'N, *supra* note 17, at 2.

of electricity is produced in-state.⁸¹ California has taken the most aggressive approach of all the states to curb emissions. Its landmark legislation establishes a comprehensive program of regulatory and market mechanisms with the goal of achieving cost-effective and quantifiable GHG emissions reductions.

The California Global Warming Solutions Act of 2006 (commonly referred to as Assembly Bill 32 or AB 32) requires the state to reduce its aggregate GHG emissions to 1990 levels by 2020.⁸² AB 32 charges the California Air Resources Board (hereinafter "CARB") with the responsibility for developing and implementing a plan to meet this challenging emissions-reduction goal. In addition to charging CARB with the responsibility of establishing by January 1, 2008 a statewide GHG emissions cap for implementation in 2020, based on 1990 emissions levels, AB 32 further requires CARB to:

Adopt a plan by January 1, 2009, for achieving emissions reductions from significant GHG sources via regulations, market mechanisms and other actions;

Adopt rules and regulations by January 1, 2011, to achieve the maximum technologically feasible and cost-effective GHG reductions, including provisions for using both market mechanisms and alternative compliance mechanisms; and

Evaluate several factors—prior to imposing mandates or implementing market mechanisms—including but not limited to: impacts on California's economy, the environment, and public health; equity between regulated entities; electricity reliability,

⁸¹ *Id.* at 2 fig.1, 3. The percentage of imported electricity GHGs compared to in-state electricity has ranged from thirty-nine to fifty-seven percent recently. *Id.* at 3.

⁸² CAL. HEALTH & SAFETY CODE § 38550 (West 2007). The California Assembly passed Assembly Bill 32, signed into law by Governor Schwarzenegger on September 27, 2006. Press Release, Office of the Governor, Gov. Schwarzenegger Signs Landmark Legislation to Reduce Greenhouse Gas Emissions (Sept. 27, 2006), available at <http://gov.ca.gov/index.php?/press-release/4111/>.

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conformance with other environmental laws, and whether the rules will disproportionately impact low-income communities.⁸³

AB 32 specifically recognizes that a market-based system can be used in conjunction with annual carbon emission limits to meet California's economy-wide goal of reducing emissions. To assist CARB in fulfilling its charge, the state created the Market Advisory Committee (hereinafter "MAC") to advise CARB on the development of a statewide plan to reduce GHG emissions. MAC is comprised of national and international experts in environmental policy, regulatory affairs, economics, and energy technologies.⁸⁴ MAC's primary objective was to design a mandatory cap-and-trade program to achieve cost-effective emissions cuts across all sectors.⁸⁵ MAC employed a systems approach and examined how a cap-and-trade program might interact with other measures such as regulations, performance-based standards, price subsidies, and tax credits.⁸⁶ In its Final Report, issued in 2007, MAC concluded that a cap-and-trade program is fully compatible with other regulatory programs being introduced in the state and that such a market-based system could contribute significantly to meeting the emissions target in AB 32.⁸⁷

MAC's Final Report included several key recommendations. First, the California cap-and-trade program should eventually incorporate all

⁸³ Cal. Air Res. Bd., AB 32 Fact Sheet – California Global Warming Solutions Act of 2006 (Sept. 25, 2006), *available at* <http://www.arb.ca.gov/cc/factsheets/ab32factsheet.pdf>.

⁸⁴ Press Release, Cal. Env'tl. Prot. Agency, Expert Advisors Release Final Cap-and-Trade Report: Recommendations Intended to Complement California's Ongoing Efforts to Reduce Emissions (June 29, 2007), *available at* <http://www.calepa.ca.gov/PressRoom/Releases/2007/PR12-062907.pdf>.

MKT. ADVISORY COMM. TO THE CAL. AIR RES. BD., RECOMMENDATIONS FOR DESIGNING A GREENHOUSE GAS CAP-AND-TRADE SYSTEM FOR CALIFORNIA, at iii (2007), *available at* http://www.energy.ca.gov/2007_publications/ARB-1000-2007-007/ARB-1000-2007-007.PDF.

⁸⁶ *Id.*

⁸⁷ *Id.*

major GHG-emitting sectors in the state.⁸⁸ The greatest attention should be given to the electricity, industry, building, and transportation sectors as these are the main contributors of emissions.⁸⁹ The program's scope, however, should be expanded over time so that it covers as many sectors, sources, and gases as possible to enable the state to meet its overall emissions reduction goal. To that end, MAC recommends that CARB adopt mandatory reporting requirements for all sources likely to be subject to a GHG emissions cap.⁹⁰

Second, the cap-and-trade program should use a combined approach with regard to the distribution of allowances. MAC recommended the initial scheme of freely allocating some shares of allowances and auctioning the other shares of allowances.⁹¹ The percentage of allowances auctioned off should increase over time.⁹² MAC encourages the state to retain flexibility to freely allocate some of the allowances in a manner that stabilizes the price impacts and manages competitiveness among California power producers.⁹³ Free allocation of allowances should be determined by environmental performance standards and the auction should be designed to promote voluntary early reductions.⁹⁴

Third, because the quantity of California's imported electricity generated from coal is significant, California's cap-and-trade program should take a "first-seller approach" to capping emissions associated with electricity. Under this approach, the entity that first sells electricity within the state must meet the compliance obligation established under the cap-and-trade scheme.⁹⁵ For power generated in California, the owner or operator of the in-state power plant is considered the first seller and would be required to meet the emissions cap.⁹⁶ For imported power, the first

⁸⁸ *Id.* at iv. "In general, CARB should seek to expand the cap-and-trade program over time so that it covers as many sectors, sources, and gases as practicable." *Id.* at 38, 79.

⁸⁹ *Id.*

⁹⁰ *Id.* at 79.

⁹¹ *Id.* at iv.

⁹² *Id.*

⁹³ *Id.* at v.

⁹⁴ *Id.*

⁹⁵ *Id.* at iv.

⁹⁶ *Id.*

seller is typically an investor-owned or municipal-owned utility or wholesale power marketer that sells electricity to a load-serving entity or large end-user.⁹⁷ The out-of-state entity under this approach would also be required to meet the emissions cap.⁹⁸

This MAC's recommendations represent a significant departure from the original scheme. Originally, AB 32 intended to regulate GHGs from the utility sector by regulating all load-serving entities (hereinafter "LSEs"), or retailers of power.⁹⁹ Legally, all of these LSEs are located in-state or at least doing business in-state.¹⁰⁰ It is clear that state regulatory agencies have jurisdictional authority over retail power markets within its state.¹⁰¹

The California carbon scheme covers all LSEs, including municipal LSEs.¹⁰² Electric generators are required to meet a CO₂ emissions level no greater than that achievable by a combined-cycle gas-fired generator.¹⁰³ Any new contracts for a term of five years or more, for

⁹⁷ *Id.*

⁹⁸ *Id.*

⁹⁹ CAL. HEALTH & SAFETY CODE § 38530(a)(2) (West 2007).

¹⁰⁰ *See id.*

¹⁰¹ *Ark. Elec. Coop. Corp. v. Ark. Pub. Serv. Comm'n*, 461 U.S. 375, 377 (1983) (citing *Munn v. Illinois*, 94 U.S. 113 (1877)).

¹⁰² *See Seth Hilton, The Impact of California's Global Warming Legislation on the Electric Utility Industry*, 19 ELEC. J., Nov. 2006, at 10, 12. California is home to the largest municipal utility in the nation, the Los Angeles Department of Water and Power (LADWP), serving a multi-million person consumer base. LADWP: Our Service History, <http://www.ladwp.com/ladwp/cms/ladwp000508.jsp> (last visited July 18, 2009). LADWP is among the most dependent California LSE's on both power imports from out of state, and coal-fired high-GHG power. Hilton, *supra* note 102, at 13.

¹⁰³ CAL. PUB. UTIL. CODE § 8341(d)(1) (West 2007). This legislation targets only electric generation, governs all new long-term energy commitments and establishes a "greenhouse gas emissions performance standard." *Id.* § 8341(a). This is specific to the electric power role in meeting AB 32 goals. The GHG emissions standard creates a specific level of permissible emissions and prohibits new construction, new long-term power contracts, and any major plant investment that will not meet the performance standard. *See id.* This prohibits load-serving entities from entering long-term power contracts with out-of-state producers who do not meet California's stringent new emissions standard. *See id.* California's Public Utilities Commission (PUC) has set the

the procurement of baseload generation, must comply with a performance standard of emitting no more than 1100 lbs CO₂/MWh of power generation.¹⁰⁴ "Baseload" generation is defined as generation that is designed and intended to operate at an annualized capacity factor of sixty percent or greater.¹⁰⁵

Roughly one-half of California's electric sector GHG emissions are the result of electric power imports from out-of-state that stem predominately from coal-fired power plants.¹⁰⁶ The impact of California's new emissions limitations will thus significantly restrict the attractiveness of coal-fired generation for California. While California has little in-state coal generation, various California LSEs, particularly the Los Angeles Department of Water and Power, import significant coal-fired power from various other states.¹⁰⁷ This legislation will have a significant impact on such LSEs.

D. Regional U.S. Carbon Cap-and-Trade

The WCI is a regional cap-and-trade effort to address climate change in Oregon, Washington, California, Arizona, New Mexico,

GHG emissions performance standard at the equivalent of the emissions from a combined-cycle natural gas plant. *Id.* § 8341(d)(1).

¹⁰⁴ CAL. CODE REGS. tit. 20, §§ 2901(d)(2), 2902(a) (2009). This is a level that conventional coal-fired electric generation will not be able to meet because even gasification combined-cycle technology generates about 1770 lbs. CO₂/MWh. Hilton, *supra* note 102, at 14.

¹⁰⁵ CAL. PUB. UTIL. CODE § 8340(a).

¹⁰⁶ See Re Integration of Greenhouse Gas Emissions Standards into Procurement Policies, Rulemaking Proceeding 06-04-009, Decision 07-09-017, 2007 WL 2579525, at *3 (Cal. Pub. Util. Comm'n. Sept. 6, 2007). Three-quarters of California's power imports come from the Southwest, and involves much coal-fired power, as opposed to the other quarter that is imported through the Northwest. AL ALVARADO & KAREN GRIFFIN, CAL. ENERGY COMM'N., REVISED METHODOLOGY TO ESTIMATE THE GENERATION RESOURCE MIX OF CALIFORNIA ELECTRICITY IMPORTS: UPDATE TO THE MAY 2006 STAFF PAPER 1, 3 (2007), available at <http://www.energy.ca.gov/2007publications/CEC-700-2007-007/CEC-700-2007007.PDF>.

¹⁰⁷ See Hilton, *supra* note 102, at 13. The three major investor-owned utilities import three to fifteen percent of their total supply in the form of out-of-state coal-fired power. *Id.* The Los Angeles DPW imports half of its power from these sources. *Id.*

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Montana, and Utah, as well as the provinces of British Columbia, Manitoba, Quebec, and Ontario.¹⁰⁸ In August 2007, WCI announced the establishment of its regional, economy-wide goal to reduce GHG emissions to fifteen percent below 2005 levels by 2020.¹⁰⁹ To help reach this goal, WCI member states and provinces have committed to a multi-sector market-based mechanism.¹¹⁰ The regulated emissions are from across all sectors and include the six GHGs reported to the UNFCCC.¹¹¹ Half of the WCI states have not been able to approve the necessary state legislation.¹¹²

¹⁰⁸ Western Climate Initiative, <http://www.westernclimateinitiative.org/> (last visited Aug. 2, 2009). Governors of Arizona, California, New Mexico, Oregon, and Washington signed the original agreement in February 2007. Energy Information Administration, State Regulations on Airborne Emissions: Update Through 2007, http://www.eia.doe.gov/oiaf/aeo/otheranalysis/aeo_2008analysispapers/sraemissions.html (last visited July 26, 2009). In May 2007, the state of Utah and the Canadian provinces of British Columbia and Manitoba joined WCI. *Id.* The states of Alaska, Kansas, Colorado, Wyoming, Idaho and Nevada, the Canadian provinces of Saskatchewan and Nova Scotia, and six Mexican states, Baja California, Sonora, Chihuahua, Coahuila, Nuevo Leon, and Tamaulipas will participate in WCI as observers. *Id.*

¹⁰⁹ Press Release, W. Climate Initiative, Western Climate Initiative Members Set Regional Target to Reduce Greenhouse Gas Emissions (Aug. 22, 2007); *see also* Regional Initiatives, http://www.pewclimate.org/what_s_being_done/in_the_states/regional_initiatives.cfm?preview=1 (describing various regional climate change agreements among the states, including the Western Climate Initiative).

¹¹⁰ Press Release, W. Climate Initiative, *supra* note 109; Cathy Cash, *Western Region Plan to Reduce GHG Emissions has Energy Suppliers Waiting for Specifics*, ELECTRIC UTIL. WK., Aug. 27, 2007, at 20.

¹¹¹ Compare W. Climate Initiative, Design Recommendations for the WCI Regional Cap-and-Trade Program 1 (2008) with Kyoto Protocol, *supra* note 9, annex A (these six GHG's include: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆)).

¹¹² See John Fleck, *Officials Forge Ahead on Emissions*, ALBUQUERQUE J., Mar. 30, 2009, at A6, available at <http://www.abqjournal.com/news/metro/301125460740newsmetro03-30-09.htm> ("The difficulty in passing legislation here is mirrored in other states. Efforts in Montana, Arizona, Utah and Washington, which are also part of the Western Climate Initiative, have run into delays, raising questions about the necessity of state-by-state efforts to get legislation passed."); Tom Banse, *Economy Thwarts Regional Cap-and-Trade Plan on*

In developing its market approach, WCI members are engaging in discussions with leaders in the RGGI and may consider some variety of incentives, standards, and regulations similar to the approach California has taken to combat climate change.¹¹³ The Western state WCI program will allow participating states to use CDM and JI Kyoto credits as offsets.¹¹⁴ Environmental groups have complained about the out-of-region geographic location of such offsets.¹¹⁵ California is the lead state in forming WCI, but now complains that it is not treated fairly in the emerging WCI legal construct. California complained that the WCI will impose an inordinate burden on the California power sector starting in 2012, by excluding restriction on the transportation sector until 2015.¹¹⁶

Shifting to the center of the nation, in November 2007, six participating Midwestern states and Manitoba, a Canadian province, executed a regional greenhouse gas emission reduction strategy.¹¹⁷ This included Minnesota, Illinois, Indiana, Iowa, Michigan, Kansas, Ohio, South Dakota, Wisconsin, Manitoba, and Ontario.¹¹⁸ Three of these eleven states and provinces are observing, rather than participating

Climate, OPB NEWS, April 3, 2009,

<http://www.abqjournal.com/news/metro/301125460740newsmetro03-30-09.htm> (“Utah and Arizona legislators went so far as to urge their governors to pull out of the Western climate group. In the New Mexico and Montana legislatures, the idea never saw the light of day. In Washington State, lawmakers considered and then quickly dropped the cap. In Oregon, the process of watering down the greenhouse gas rules underway.”).

¹¹³ See August WCI Update, westernclimateinitiative.org/news-and-updates/67-August-wci-update (last visited Sept. 21, 2009) (“WCI Partner jurisdictions have initiated discussions with the other two regional programs in North America: the Regional Greenhouse Gas Initiative (RGGI) and the Midwestern Greenhouse Gas Reduction Accord. The three regions are proposing to collaborate in key areas, which will expand the footprint of each of the regional program designs, particularly in the area of offsets.”).

¹¹⁴ *Western GHG Trading Plan Draws Concerns Over Offsets, Auctions*, CARBON CONTROL NEWS, July 28, 2008.

¹¹⁵ *Id.*

¹¹⁶ *California Utilities Cry Foul Over Western State Cap-and-Trade Plan*, CARBON CONTROL NEWS, Aug. 22, 2008, at 4.

¹¹⁷ See Midwestern Governor’s Ass’n, Midwestern Energy Sec. & Climate Stewardship Summit, Midwestern Greenhouse Gas Reduction Accord (Nov. 15, 2007), available at http://www.midwesterngovernors.org/Publications/Greenhouse%20gas%20accord_Layout%201.pdf.

¹¹⁸ *Id.*

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initially.¹¹⁹ The group worked to develop a cap-and-trade carbon program for implementation in 2010, and without specific targets will attempt to cut emissions by 2020.¹²⁰

This region depends heavily on coal-fired electric generation, and is, therefore, distinct technologically from both California and the RGGI states. Recommendations would allow twenty percent of reductions to be achieved through use of offsets.¹²¹ There is dispute as to whether allowances can come from other states.¹²²

The RGGI, Western states,' and Midwest states' carbon regulation schemes collectively include about half of the U.S. states plus Canadian providences. RGGI only affects CO₂ from larger power plants, while the regional climate initiatives are looking at GHGs more broadly from various economic sectors.

III. STAKEHOLDER DISPUTES INSIDE THE EU AND THE U.S.

There are a handful of recent major serious disputes within the EU:

Whether allowances to emit CO₂ will be auctioned to industry beginning in 2013, or freely allocated to industry;
Conflict between original and later-joining states;
The means of future application to coal-fired electric power production;
Whether states are willing to concede decision-making to a central EU; and
The speed and base of program requirements.

A. Auction of Allowances to Emit

¹¹⁹ *Id.*

¹²⁰ See ADVISORY GROUP, MIDWESTERN GREENHOUSE GAS REDUCTION ACCORD, DRAFT FINAL RECOMMENDATIONS OF THE ADVISORY GROUP § 1.1.1, at 3 (2009), available at http://www.midwesternaccord.org/Accord_Draft_Final.pdf.

¹²¹ *Id.* § 4.5, at 23.

¹²² See *id.* § 3.5, at 12.

Auction of allowances has emerged as a key conflict. If the auction of allowances idea is adopted, it will have profound wealth-shifting implications. The EU-ETS program was originally committed to free allocation of allowances to regulated industrial emitters.¹²³ Even though in Phase I (2005-2007) up to five percent of carbon emissions allowances were allowed to be auctioned by an EU country, only four of the twenty-seven nations employed any auction (Denmark, Ireland, Hungary, and Lithuania),¹²⁴ and then in total auctioned only 0.13% of total allowances.¹²⁵ During the current 2008-2012 phase, it is expected that eight Western European nations will auction about three percent of EU-ETS allowances.¹²⁶ Auction of CO₂ allowances to all power generators has been proposed by the European Commission to commence in 2013, phased to 100% auction by 2020.¹²⁷ There also is an effort for post-2012 centralization of allocation of EU emissions rights, eliminating the controversial past practice of national allocation.¹²⁸

Poland and other Eastern EU nations have resisted immediate auction of allowances.¹²⁹ Both assert that its industries are more energy-intensive than in Western EU nations, and, thus, would be competitively disadvantaged by allowance auctions; France and Luxembourg join this concern.¹³⁰ Italian leaders resisted EU auction of allowances as “not suitable, . . . untenable” and “an act of madness.”¹³¹ Political concessions were made in Poznan, Poland, meetings, in December 2008, where the former Eastern-Block EU states were given twelve percent of future

¹²³ Council Directive 2003/87, *supra* note 5, arts. 9-11.

¹²⁴ Judit Zegnál, *Lithuanian Emissions Auction Success Expected*, BUDAPEST BUS. J., Sept. 3, 2007, available at <http://www.euets.com/index.php?page=news&newsid=62&l=1>.

¹²⁵ CONVERY ET AL., *supra* note 6, at 11.

¹²⁶ A. DENNY ELLERMAN & PAUL. L. JOSKOW, PEW CTR. ON GLOBAL CLIMATE CHANGE, THE EUROPEAN UNION'S EMISSIONS TRADING SYSTEM IN PERSPECTIVE 38 tbl.4 (2008).

¹²⁷ Stephen Gardner, *EU Parliament, Council Making Progress on Post-2012 Emissions Trading Scheme*, 39 ENV'T REP. (BNA) 1417 (2008).

¹²⁸ *Id.*

¹²⁹ Leigh Phillips, *Emissions Permit Auctioning Key Concern of Eastern Europe*, EUOBSERVER, Mar. 4, 2008, <http://euobserver.com/9/25767>.

¹³⁰ *Id.*

¹³¹ Renata Goldirova, *Rocky Path ahead for EU Green Legislation*, EUOBSERVER, Oct. 21, 2008, <http://euobserver.com/9/26965>.

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auction revenues from allowance auction, in order to subsidize continuation of certain high-carbon industries.¹³²

In the U.S., there also has been a divergence on auctions. In the first U.S. carbon program, RGGI, commencing January 2009, the Guiding Principles Agreement provided: “[t]he initial phase of the cap-and-trade program will entail the allocation and trading of carbon dioxide allowances to and by sources in the power sector only.”¹³³ However, most states have since switched to an auction of allowances to essentially any bidder, not an allocation to affected facilities as contemplated in the Guiding Principles Agreement. This will transfer income among states.

The 2008 financial meltdown has increased pressure to raise revenues through auction rather than traditional allocation of allowances without charge.¹³⁴ That pressure is felt both in the EU and the U.S. environmental groups which has resulted in those groups seeking auction of all allowances to raise revenues.¹³⁵ Environmental non-governmental organizations (hereinafter “NGOs”) are similarly active in both the EU and U.S. Criticism of the WCI efforts regarding whether allowances will be auctioned has occurred.¹³⁶

Sempra Energy Utilities, the electric and gas distribution utility in the greater San Diego area, questioned the legality of auctioning allowances if the revenues therefrom were returned to the state general fund.¹³⁷ The Los Angeles Department of Water and Power (“LADWP”),

¹³² Pete Harrison & Huw Jones, *EU Finalizes Deal to Fight Climate Change*, Dec. 17, 2008, <http://www.enn.com/climate/article/38880>.

¹³³ REG’L GREENHOUSE GAS INITIATIVE, GOALS, PROPOSED TASKS, SHORT-TERM ACTION ITEMS 1 (2003), available at <http://www.rggi.org/docs/actionplanfinal.pdf>.

¹³⁴ Doug Obey, *Wall Street Bailouts May Intensify Focus on Carbon Trading Revenues*, CARBON CONTROL NEWS, Sept. 19, 2008, at 1.

¹³⁵ *Environmentalists Urge Western States to Auction GHG Allowances*, CARBON CONTROL NEWS, Sept. 22, 2008.

¹³⁶ *Western Climate Officials Create New Panels to Tackle Tough Policies*, CARBON CONTROL NEWS, Nov. 18, 2008.

¹³⁷ See Letter from Bernie Orozco, Dir., State Gov’t Affairs, Sempra Energy, to Dr. Alan Lloyd, Chair, Cal. Evtl. Protection Agency (Jan. 30, 2006), available at <http://www.climatechange.ca.gov/publications/cat/comments/Sempra%20Energy%20January%2030,%202006.pdf>; Letter from Michael Murray, Reg’l Vice President, State Gov’t Affairs, Sempra Energy et al., to Kevin Kennedy, Chief, Office of Climate Change,

the largest municipal utility in the U.S., recently threatened legal suit over the California proposal to auction carbon emission allowances, alleging that it would result in a one billion per year transfer from legacy coal utilities in the Southern part of the state to Northern legacy non-coal utilities and its ratepayer in the North.¹³⁸ LADWP also charged that auction of allowances was an illegal tax and violated the state Constitution.¹³⁹ The coal industry, power, and railroad industries have threatened some states with suit over the RGGI auction program in the Eastern U.S.¹⁴⁰ Auctioning state allowances becomes even more contentious in the U.S., as it raises issues of possible unconstitutionality of the “bright line” between federal and state energy regulatory authority, depending on its implementation, within the U.S. legal system.

B. Conflict with New Entrants and Relative Degree of Development

The carbon tensions between nations in the EU mirror each nation's degree of development and economic self-interest, notwithstanding that the impact of each molecule of CO₂ has identical global impact. Europe is the first regional carbon trading area of the world, and contains thirty-four of the thirty-nine Kyoto-regulated Annex I carbon nations. The five other Kyoto carbon-regulated countries have no common borders with other countries (Japan, Australia, and New Zealand) or border only with non-participating countries (Canada and Turkey).

The twenty-seven EU nations increasingly are more acrimoniously divided on carbon policy between the EU-15, more affluent original Western European EU member states, and the more recent less affluent former Soviet Block Eastern European members, eight of whom joined the EU in 2004 and two more in 2007. The EU-ETS carbon scheme, originally commencing in 2005, covered the then-twenty-five EU

Cal. Air Res. Bd. (June 12, 2009), *available at* <http://www.arb.ca.gov/cc/capandtrade/meetings/051809/may18pcpgsescesempra.pdf>.

¹³⁸ *Major Utility Argues California GHG Plan Illegal, Seeks Rehearing*, CARBON CONTROL NEWS, Nov. 24, 2008, at 2.

¹³⁹ *Id.*

¹⁴⁰ Curt Barry, *First RGGI Allowance Auction May Trigger Coal Industry Lawsuits*, CARBON CONTROL NEWS, July 16, 2008, at 1.

countries. With the addition of Bulgaria and Romania in 2007, this raised the number of EU members to twenty-seven, with all required to participate in CO₂ reduction through the EU-ETS.¹⁴¹ Three non-EU member countries, Norway, Iceland, and Liechtenstein, recently joined the EU-ETS carbon system.¹⁴²

Romania and Bulgaria demanded larger CO₂ emission allocations than were given to each by the European Commission, and thereafter judicially appealed this allocation to the European Court of First Instance.¹⁴³ During Phase I of the EU-ETS (2005-2007), the Eastern Block countries received an allocation surplus of free allowances based on a 1990 baseline pre-Soviet-restructuring, which allowed its industries to sell surplus free allowances for profits.¹⁴⁴ In the current Phase II (2008-2012), these countries have had their CO₂ allocations slashed.¹⁴⁵ However, post 2012, the EU proposal, reflecting accession to political pressure to achieve consensus, now is to allow central and eastern EU countries to increase emissions up to twenty-percent above 2005 levels, rather than reduce carbon.¹⁴⁶

These eight Eastern European countries, joined by Italy and Greece, are the ten countries leading the revolt inside the EU-ETS. Poland, Bulgaria, Hungary, and Slovakia launched legal actions against the EU Commission, asserting that even their relatively modest future carbon limits are too strict for the countries' economic growth.¹⁴⁷ These

¹⁴¹ CONVERY ET AL., *supra* note 6, at 22.

¹⁴² *Id.*

¹⁴³ *Id.*

¹⁴⁴ *EU ETS Turns Sour for Poland and Other Neighboring Eastern European Countries*, REDORBIT, Sept. 11, 2008,

http://www.redorbit.com/news/business/1551325/eu_ets_turns_sour_for_poland_and_others_neighboring_eastern/index.htm.

¹⁴⁵ *Id.*

¹⁴⁶ See Renata Goldirova, *Brussels to Unveil EU Green Strategy Amid Strong Criticism*, EUOBSERVER, Jan. 21, 2008, <http://euobserver.com/9/25493>.

¹⁴⁷ Erica Herrero-Martinez, *States Study Carbon Trading*, WALL ST. J., Aug. 1, 2007, at B5A.

four countries, along with Estonia, Latvia, Lithuania, and Romania, form a block of eight countries which want more concessions on future carbon.¹⁴⁸

These eight countries, joined by Greece, representing one-third of the EU members, have voting power together to block or stall EU carbon control action. The EU process requires at least ninety-one votes of the 345 in the European Council to block further actions,¹⁴⁹ just as forty percent of U.S. Senators can block action on carbon legislation. Prime Minister Ivars Godmanis of Latvia stated that he would veto any climate package unless it contained more concessions for the Eastern countries that joined the EU in 2004.¹⁵⁰ "Poland is ready to veto . . .," stated Poland Foreign Minister Radek Sikorksi.¹⁵¹ Czech President Klaus, has publicly questioned whether there is such a thing as human-made climate change.¹⁵² Less developed areas have resisted consensus.

There is some precedent for phasing in the compliance obligation of developing countries with international environmental requirements. The Montreal Protocol included trade sanctions for enforcement, giving developing countries a ten-year grace period.¹⁵³ Some countries are now discussing trade sanctions as a mechanism to force reluctant countries to adopt requirements.¹⁵⁴ However, tariff sanctions could run afoul of WTO requirements against trade barriers concerning renewable energy sources.

¹⁴⁸ Siobahn Hall, *Tough Negotiations on EU Climate Package*, ENERGY ECONOMIST, Nov. 1, 2008, at 33.

¹⁴⁹ Derek Scally, *Poland Says it has Gathered Enough Support to Stall EU Carbon Emission Controls*, IRISH TIMES, Oct. 4, 2008, at 11, available at http://www.irishtimes.com/newspaper/world/2008/1004/1222_959350204.html.

¹⁵⁰ Stephen Castle, *European Nations, Fearing Downturn, Seek to Revise Agreement on Emissions Cuts*, N.Y. TIMES, Oct. 17, 2008, at A6, available at <http://www.nytimes.com/2008/10/17/world/europe/17union.html>.

¹⁵¹ Leigh Phillips, *Italy, Poland Threaten to Veto EU Climate Package*, EUOBSERVER, Oct. 16, 2008, <http://euobserver.com/9/26945>.

¹⁵² David Charter, *EU's New Figurehead Believes Climate Change is a Myth*, TIMES (London), Jan. 2, 2009, available at <http://www.timesonline.co.uk/tol/news/world/europe/article5430362.ece>.

¹⁵³ Montreal Protocol, *supra* note 29, art. 5.

¹⁵⁴ See generally LEESTEFFFY JENKINS, *Trade Sanctions: Effective Enforcement Tools*, in IMPROVING COMPLIANCE WITH INTERNATIONAL ENVIRONMENTAL LAW 221, 221-228 (James Cameron et al. eds., 1996) (analyzing precedent for using trade sanctions as a legitimate means of achieving international environmental objectives).

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Article XX of General Agreement on Tariffs and Trade (hereinafter “GATT”) provides health and environmental exceptions that can be pursued outside national territory if aimed at a conservation or protection goal.¹⁵⁵ Even the Kyoto Protocol states that its mechanisms should not imperil international trade.¹⁵⁶

The LADWP continues to fight the California cap-and-trade proposal as a “wealth transfer” between utility ratepayers in different parts of the state, and distrusts that auction funds once in the hands of state legislators would be returned to utility ratepayers.¹⁵⁷ The early twenty-three states regulating carbon at the state level in the U.S. are generally more liberal politically, than the states that have not so committed, and will resist future regulation. Those states that will be last to embrace carbon regulation in the U.S. have a tremendous ability, if the states resist, to be the “leakage” in the system. The results of modeling commissioned by the RGGI Staff Working Group found that a substantial proportion of CO₂ emissions avoided by RGGI will be offset by corresponding increases in non-RGGI states, such as Pennsylvania.¹⁵⁸

C. Regions of Embedded High-Carbon Coal-Powered Generation

This Eastern European EU Block joined by Greece and Italy fear power sector uncompetitiveness or “leakage” of other power into its economies vis-à-vis larger utilities in France and Germany.¹⁵⁹ To reduce

¹⁵⁵ General Agreement on Tariffs and Trade art. XX(b), Oct. 30, 1947, 61 Stat. A-11, 55 U.N.T.S. 194.

¹⁵⁶ Kyoto Protocol, *supra* note 9, art. 2(3).

¹⁵⁷ *Major Utility Argues California GHG Plan Illegal, Seeks Rehearing*, *supra* note 138.

¹⁵⁸ See RGGI EMISSIONS MULTI-STATE STAFF WORKING GROUP, REG’L GREENHOUSE GAS INITIATIVE, POTENTIAL EMISSIONS LEAKAGE AND THE REGIONAL GREENHOUSE GAS INITIATIVE (RGGI): EVALUATING MARKET DYNAMICS, MONITORING OPTIONS, AND POSSIBLE MITIGATION MECHANISMS 8-11 (2007), *available at* http://www.rggi.org/docs/il_report_final_3_14_07.pdf.

¹⁵⁹ Scally, *supra* note 149; Phillips, *supra* note 151; Michael Levitin, *Poland Leads Revolt against EU Climate Change Deal*, LONDON DAILY TELEGRAPH, Oct. 4, 2008, at 19, *available at* <http://www.telegraph.co.uk/earth/earthnews/3352775/EU-climate-change-cuts-Poland-leads-revolt-over-Russia-fears.html>.

annual carbon emissions, if EU countries are forced to shift from coal to less carbon-intensive natural gas-fired power generation, it would make EU countries more dependent on natural gas imported from Russia: “[w]e are dependent on Russia for ninety-seven percent of our gas and more than ninety percent of our petrol.”¹⁶⁰ Not forgotten, was Russia’s quick strike into neighboring Georgia in August 2008, and its termination of gas supplies to the Ukraine in January 2006 and again in 2009, which greatly diminished gas supplies throughout the EU.

“Fifty-eight percent of the world’s gas is owned by Russia, Iran, and Qatar. “Coal is on every continent,” notes coal executive Richard Budge.¹⁶¹ Poland generates ninety-five percent of its power production from coal, which will require more auctioned CO₂ allowances than other fossil fuels, and could increase Poland’s electric power prices by up to an estimated ninety percent.¹⁶² This resistance resulted in recent EU fracturous concessions to the most coal-burning nations in order to hold the EU-ETS together. At the Poznan, Poland, and Kyoto Protocol carbon meetings in December 2008, EU nations tentatively agreed to extend the allocation of free carbon emission allowances to utilities equal to the needs of an efficient coal-burning power plant and double time by extending compliance dates to 2020.¹⁶³ This threatens even the modest

¹⁶⁰ Levitin, *supra* note 159.

¹⁶¹ Mark Landler, *For Europe, a Green Self-Image Clashes with a Reliance on Coal*, N.Y. TIMES, June 20, 2006, at A1, available at <http://www.nytimes.com/2006/06/20/business/worldbusiness/20eurocoal.html>.

¹⁶² Hall, *supra* note 148.

¹⁶³ See CMS CAMERON MCKENNA LLP, PHASE III OF THE EU EMISSIONS TRADING SCHEME 8-9 (2009), available at <http://www.law-now.com/cmck/pdfs/nonsecured/phase3.pdf> (“New EU member states may temporarily derogate from the full auctioning rule applicable to the power sector and receive a proportion of their allowances free of charge if: in 2007, the electricity network of a particular Member State was not interconnected with the EU system; or in 2007, the electricity network was connected to the EU system through a single line with a capacity of less than 400MW; or in 2006, more than 30% of electricity of a particular Member State was produced from a single fossil fuel and the GDP per capita in relation to the EU average did not exceed 50% of the average GDP per capita of the EU.”). The auctioning for such member states will be a minimum thirty percent, increasing to 100% in 2020. Climate Action Network Europe: Energy and Climate Policy in Europe, www.climnet.org/EUenergy/EU_Energy_Package_Outcome.html (last accessed Sept. 23,

goals of the Kyoto Protocol and the EU-ETS and contrasts with the recent call by some members of the scientific community for radical reductions in CO₂ emissions before a “tipping point” in global climate.¹⁶⁴

Similar divisions to those in the EU are discernible in some of the states in the U.S. considering carbon regulation. The areas of the U.S. most reliant on coal power are not the leaders in the U.S. on carbon regulation. Disputes have already erupted between California and the other six WCI member states, still years before program commencement, over whether the nature of the cap is too restrictive to the California power industry, which is the first industry sector targeted.¹⁶⁵ The Midwestern state carbon program has stalled amid dissent involving coal-dependent states.¹⁶⁶

Similarly, U.S. states that have lower median incomes are not generally the leaders on carbon regulation. The President of Duke Energy worries that federal carbon regulation will be “California-centric” and “ideologically driven.”¹⁶⁷ He claims that California imports a lot of coal-fired and hydroelectric power, has the highest U.S. disposable income, and that California has high levels of electric consumption.¹⁶⁸

The coal industry has threatened suit against RGGI as being an unauthorized tax or otherwise illegal.¹⁶⁹ A New York RGGI official commented that there is a substantial chance of litigation challenge in New York, Maryland, and Massachusetts.¹⁷⁰ This prophecy was realized in 2009, when the RGGI carbon regulatory program was challenged in

2009). “One of the costs of avoiding 100% free allocation in the [Central and Eastern European] power sector, is a provision on state aid that allows for fifteen percent of the costs of new coal power plants ([Carbon Capture and Storage]-ready) between 2013 and 2016 to be met using auction revenues.” *Id.*

¹⁶⁴ Hansen, *supra* note 3; McKibben, *supra* note 3.

¹⁶⁵ See *California Utilities Cry Foul Over Western State Cap-and-Trade Plan*, *supra* note 116.

¹⁶⁶ *Cf. supra* note 112 (regarding hesitancy of more than half of the WCI western states to adopt implanting legislation, now two years into their consideration).

¹⁶⁷ Jeff Ryser, *Duke’s Rogers Fears CO2 Legislation will be ‘California-centric’ and Driven by Ideology*, ELECTRIC UTIL. WK., Feb. 16, 2009, at 22.

¹⁶⁸ *Id.*

¹⁶⁹ Barry, *supra* note 140.

¹⁷⁰ *Id.*

New York by an owner of an independent power generator who was subject to that regulation.¹⁷¹ This generation asset owner challenged the RGGI scheme as an improperly authorized state program in violation of the state's constitution, as well as a violation of the Compact Clause of the U.S. Constitution.¹⁷²

D. *Centralized Versus Decentralized Carbon Control*

There is movement to centralize Brussels EU allocation of carbon reduction targets rather than continue state control. The current EU carbon regime represents as much political expediency as an objective application of neutral scientific principles. The twenty-seven participating Annex I EU countries made significant differentiation among its responsibilities to reduce carbon emissions. This ranges from a twenty-eight percent carbon reduction in countries like Luxembourg, to an allowed twenty-seven percent carbon *increase* in Portugal.¹⁷³

Consequently, five of the more developed EU-ETS countries (UK, Italy, Spain, Ireland, and Austria) were short of allowances, while several eastern European EU members were over-allocated allowances, which caused them to trade allowances to power industries in Western EU countries, earning the allowance sellers approximately €700 million.¹⁷⁴ The power industry was the sector which shouldered that shortage, while other industries in the country were protected in national allocations.¹⁷⁵ This was because the often monopolized power sector did not face international competition in most EU countries, and thus did not face "leakage" of market share from supply outside the state.

Because of inconsistencies and controversies in individual countries, the plan for post-2012 is centralized EU allocation of carbon emissions rights, eliminating current national allocation.¹⁷⁶ Yet, some of

¹⁷¹ *Indeck Corinth v. Paterson*, No. 2009369 (N.Y. Sup. Ct. Jan. 29, 2009).

¹⁷² Verified Joint Petition and Complaint, *Indeck*, No. 2009369 (N.Y. Sup. Ct. Jan. 29, 2009).

¹⁷³ HOBLEY, *supra* note 32, at 129.

¹⁷⁴ CONVERY ET AL., *supra* note 6, at 14.

¹⁷⁵ *Id.* at 11.

¹⁷⁶ Gardner, *supra* note 127.

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the Eastern European countries (Poland, Czechoslovakia, and Hungary) are expected to challenge its future allocations. Central and Eastern EU states have launched legal proceedings against the European Commission, each alleging its allocations are already too low.¹⁷⁷

These issues parallel similar concerns in the U.S. To get consensus for RGGI, New York gave away some of its carbon allocation to other states. In RGGI, a deregulated power sector shoulders the entire carbon reduction burden. There are disputes over whether the twenty-three states starting to regulate carbon will concede authority willingly to federal control or whether it will be accepted.¹⁷⁸ There is vigorous dispute in the U.S. Congress over whether to “grandfather” existing state carbon regulation, or centralize a single national system.¹⁷⁹

A similar conflict is already visible at the regional level. The state of California has complained that the WCI will impose an inordinate burden on the California power sector by excluding the transportation sector until 2015.¹⁸⁰ Because California utilities rely on out-of-state electricity imports, California utilities argue that it requires extra allocation of any allowances from other states. Such conflicts already are dividing stakeholders within states.¹⁸¹ Terry Tamminen, an energy advisor to California Governor Schwarzenegger, characterized the LADWP position against California’s planned 2012 carbon control as “morally bankrupt . . . it is time for those utilities [that] have put themselves in this position to step up and internalize the cost that they have been foisting on the rest of us for decades . . . so that people in Los Angeles can have cheap electricity.”¹⁸² Tamminen stated that potential legal challenges could pose the biggest stumbling block to California’s climate change initiatives.¹⁸³

¹⁷⁷ HOBLEY, *supra* note 32, at 135.

¹⁷⁸ *States for Preemption?*, CARBON CONTROL NEWS, Mar. 31, 2008.

¹⁷⁹ See American Clean Energy and Security Act, H.R. 2454, 111th Cong. § 861 (2009).

¹⁸⁰ *California Utilities Cry Foul Over Western State Cap-and-Trade Plan*, *supra* note 116.

¹⁸¹ *Id.*

¹⁸² Lisa Weinzimer, *Schwarzenegger Advisor Says States, Regions will Take Lead on Climate Programs*, ELECTRIC UTIL. WK., June 16, 2008, at 7.

¹⁸³ *Id.*

E. *The Pace of Carbon Control*

At issue is whether the original EU and Kyoto Protocol 1990 carbon emission baselines (prior to Soviet collapse) or the recently proposed 2005 carbon baselines (reflecting lower Eastern EU CO₂ levels) will be the baseline against which carbon compliance will be measured. Poland and Bulgaria argue that more advanced Western EU countries should do more carbon reduction, while the poorer Eastern European countries should do less.¹⁸⁴ Poland's Prime Minister, Donald Tusk, noted that no global warming-related actions should result in an increase in the price of energy, especially during times of economic downturn.¹⁸⁵ Italian Prime Minister Berlusconi called for less expensive carbon regulation in tough economic times: "I am ready to use our veto powers. Our companies are in no state to take on costs like those we thought about last year."¹⁸⁶ He stated that the proposed EU-ETS carbon reduction targets for 2020 would crucify Italian industry.¹⁸⁷

The debate in the U.S. follows similar lines. First, national carbon legislation was held up in the U.S. Congress in 2008 regarding technological and policy compromises, and forty-percent of U.S. Senate members can do so indefinitely if consensus is not achieved. During a period of economic downturn, similar questions are emerging as to how aggressive U.S. carbon control can be. California Governor Schwarzenegger, one of the earliest and most stalwart proponents for

¹⁸⁴ Castle, *supra* note 150.

¹⁸⁵ Renata Goldirova, *Poland Gears Up for Battle over CO₂ Emissions*, EUOBSERVER, Oct. 9, 2008, <http://euobserver.com/9/26901>.

¹⁸⁶ Joe Murphy, *Cost Row Threatens EU Climate Strategy*, LONDON EVENING STANDARD, Oct. 16, 2008, at 2, available at <http://www.thisislondon.co.uk/standard/article-23573744-details/Cost+row+threatens+EU+climate+strategy/article.do>; see also Hall, *supra* note 148.

¹⁸⁷ David Charter & Rory Watson, *Black Clouds Hang over Green Targets as EU States Say we Can't Afford Them*, TIMES (London), Oct. 17, 2008, at 6.

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carbon regulation, moved in early 2009 to ease green power regulations because of California's economic downturn.¹⁸⁸

IV. HOW EU PAST IS U.S. PROLOGUE

Not everything European becomes an aspect of U.S. reality. However, with carbon regulation, there is noticeable parallel carryover from issues confronting the "older" continent to the "new." This is because carbon regulation is a function of both regulation and technology, with which there is substantial overlap in modern Western industrial countries on each side of the Atlantic. There also is deliberate synchronization: New U.S. Energy Secretary, Steven Chu, has announced that he and President Obama support a simple cap-and-trade system for the U.S., which would "integrate" with the systems in the EU.¹⁸⁹

The economic crisis is causing developing areas to second-guess the rate of required regional GHG reduction. There is a policy split based on the degree of regional reliance on coal generation as the power source for the economy and development. The EU and U.S. areas most reliant on coal power are most resistant to aggressive cap-and-trade carbon regulation and allowance auction.

Suits have been threatened against both RGGI states and in California regarding these disputes in the form of carbon regulation. In California, disputes have pitted investor-owned utilities against the nation's largest municipal utility, which threatens suit over its alleged inequity against coal-dependent regions. In the ten RGGI states, suit is threatened over auction of allowances designed to raise the cost of coal-produced wholesale power, as well as against efforts to stop the interstate flow of outside-region high-carbon power into the RGGI region. Allegations of the Constitution Supremacy Clause and Commerce Clause violations are also at play.

The EU-ETS embodies eighty-five percent of world countries now regulating carbon emissions. The pattern of recently escalating EU dispute and spirited policy dissent is prologue. Given technological and

¹⁸⁸ Lisa Weinzimer, *Schwarzenegger Presses for Easing Green Regulations to Head Off Financial Crisis*, ELECTRIC UTIL. WK., Jan. 12, 2009, at 15.

¹⁸⁹ *New DOE Secretary Backs Cap-and-Trade*, supra note 4.

policy similarities, the recent EU carbon disagreements foreshadow upcoming U.S. disputes and debate. In times of economic collapse, there is worldwide pressure for the carbon regulatory system to morph into a revenue raising scheme through auction of allowances. These issues are fundamental to the scope, speed, and effectiveness of GHG reduction policy before the world passes any "tipping point" of diminishing scientific effectiveness. Past is prologue: these recent EU disputes foreshadow the evolution of the U.S. debate.